Appendix

Table 3

```
REMARK coordinates from minimization refinement
REMARK refinement resolution: 100.0 - 3.2 A
REMARK starting r= 0.3631 free_r= 0.4208
REMARK final    r= 0.3466 free_r= 0.4154
REMARK rmsd bonds= 0.009443  rmsd angles=  1.93913
REMARK wa= 16.2281
REMARK target= mlf cycles= 1 steps= 250
REMARK sg= P4(1)2(1)2 a= 200.76 b= 200.76 c= 292.938 alpha= 90 beta= 90 gamma= 90
REMARK parameter file 1  : CNS_TOPPAR:protein_rep.param
REMARK parameter file 2  : CNS_TOPPAR:ion.param
REMARK molecular structure file: ../pdb/rnap_m3_gen.mtf
REMARK input coordinates: ../bgroup/bg1.pdb
REMARK reflection file= ../../fobs/scale_b25.cv
REMARK ncs= restrain  ncs file= ../ncs100.def
REMARK B-correction resolution: 8.0 - 3.2
REMARK initial B-factor correction applied to f_scale :
REMARK   B11=   0.112 B22=   0.112 B33=  -0.224
REMARK   B12=   0.000 B13=   0.000 B23=   0.000
REMARK B-factor correction applied to coordinate array B:    0.067
REMARK bulk solvent: density level= 0.315481 e/A^3, B-factor= 300 A^2
REMARK reflections with |Fobs|/sigma_F < 0.0 rejected
REMARK reflections with |Fobs| > 10000 * rms(Fobs) rejected
REMARK theoretical total number of refl. in resol. range:     98907 ( 100.0 % )
REMARK number of unobserved reflections (no entry or |F|=0):   5201 (   5.3 % )
REMARK number of reflections rejected:                            0 (   0.0 % )
REMARK total number of reflections used:                      93706 (  94.7 % )
REMARK number of reflections in working set:                  88974 (  90.0 % )
REMARK number of reflections in test set:                      4732 (   4.8 % )
CRYST1  200.760  200.760  292.938  90.00  90.00  90.00 P 41 21 2
REMARK FILENAME="min1_100-3.2.pdb"
REMARK VERSION:0.4a
ATOM      1  CB  ALA A   6       1.632  67.447  73.985  1.00 51.08      A
ATOM      2  C   ALA A   6       1.498  65.047  73.318  1.00100.07      A
ATOM      3  O   ALA A   6       2.714  64.811  73.324  1.00100.07      A
ATOM      4  N   ALA A   6       1.065  65.705  75.679  1.00100.07      A
ATOM      5  CA  ALA A   6       0.907  66.105  74.245  1.00100.07      A
ATOM      6  N   ALA A   7       0.639  64.425  72.515  1.00 85.24      A
ATOM      7  CA  ALA A   7       1.075  63.413  71.564  1.00 85.24      A
ATOM      8  CB  ALA A   7       1.051  62.030  72.216  1.00 14.75      A
ATOM      9  C   ALA A   7       0.130  63.450  70.380  1.00 85.24      A
ATOM     10  O   ALA A   7      -0.677  64.368  70.252  1.00 85.24      A
ATOM     11  N   ALA A   8       0.242  62.448  69.519  1.00100.07      A
ATOM     12  CA  ALA A   8      -0.605  62.342  68.340  1.00100.07      A
ATOM     13  CB  ALA A   8      -1.848  61.513  68.673  1.00100.07      A
ATOM     14  C   ALA A   8      -1.025  63.704  67.786  1.00100.07      A
ATOM     15  O   ALA A   8      -2.031  64.276  68.207  1.00100.07      A
ATOM     16  N   PRO A   9      -0.248  64.248  66.841  1.00 56.97      A
ATOM     17  CD  PRO A   9       1.082  63.783  66.416  1.00100.07      A
ATOM     18  CA  PRO A   9      -0.561  65.545  66.236  1.00 56.97      A
ATOM     19  CB  PRO A   9       0.774  65.969  65.640  1.00100.07      A
ATOM     20  CG  PRO A   9       1.355  64.665  65.227  1.00100.07      A
ATOM     21  C   PRO A   9      -1.661  65.430  65.188  1.00 56.97      A
ATOM     22  O   PRO A   9      -2.702  64.838  65.445  1.00 56.97      A
ATOM     23  N   VAL A  10      -1.419  65.997  64.011  1.00 83.69      A
ATOM     24  CA  VAL A  10      -2.377  65.972  62.907  1.00 83.69      A
ATOM     25  CB  VAL A  10      -3.291  67.218  62.930  1.00 46.48      A
ATOM     26  CG1 VAL A  10      -4.123  67.287  61.657  1.00 46.48      A
ATOM     27  CG2 VAL A  10      -4.196  67.180  64.147  1.00 46.48      A
ATOM     28  C   VAL A  10      -1.555  66.004  61.625  1.00 83.69      A
ATOM     29  O   VAL A  10      -0.401  66.437  61.637  1.00 83.69      A
ATOM     30  N   PHE A  11      -2.129  65.546  60.519  1.00 35.63      A
ATOM     31  CA  PHE A  11      -1.393  65.576  59.273  1.00 35.63      A
ATOM     32  CB  PHE A  11      -0.988  64.172  58.831  1.00100.07      A
ATOM     33  CG  PHE A  11       0.221  64.162  57.943  1.00100.07      A
ATOM     34  CD1 PHE A  11       1.403  64.764  58.368  1.00100.07      A
ATOM     35  CD2 PHE A  11       0.178  63.597  56.674  1.00100.07      A
ATOM     36  CE1 PHE A  11       2.521  64.808  57.545  1.00100.07      A
ATOM     37  CE2 PHE A  11       1.297  63.635  55.838  1.00100.07      A
ATOM     38  CZ  PHE A  11       2.470  64.244  56.277  1.00100.07      A
ATOM     39  C   PHE A  11      -2.180  66.268  58.168  1.00 35.63      A
ATOM     40  O   PHE A  11      -2.207  65.819  57.012  1.00 35.63      A
ATOM     41  N   THR A  12      -2.821  67.371  58.546  1.00 60.55      A
ATOM     42  CA  THR A  12      -3.590  68.189  57.615  1.00 60.55      A
ATOM     43  CB  THR A  12      -3.781  69.612  58.175  1.00100.07      A
ATOM     44  OG1 THR A  12      -4.149  69.541  59.557  1.00100.07      A
ATOM     45  CG2 THR A  12      -4.858  70.350  57.402  1.00100.07      A
ATOM     46  C   THR A  12      -2.728  68.294  56.363  1.00 60.55      A
```

```
ATOM     47  O    THR A  12      -1.609  68.785  56.430  1.00 60.55      A
ATOM     48  N    ALA A  13      -3.227  67.855  55.218  1.00 47.73      A
ATOM     49  CA   ALA A  13      -2.390  67.910  54.029  1.00 47.73      A
ATOM     50  CB   ALA A  13      -1.906  66.489  53.705  1.00 36.60      A
ATOM     51  C    ALA A  13      -2.941  68.571  52.760  1.00 47.73      A
ATOM     52  O    ALA A  13      -2.799  68.003  51.683  1.00 47.73      A
ATOM     53  N    THR A  14      -3.530  69.764  52.861  1.00 59.31      A
ATOM     54  CA   THR A  14      -4.067  70.450  51.671  1.00 59.31      A
ATOM     55  CB   THR A  14      -4.181  72.005  51.888  1.00 61.51      A
ATOM     56  OG1  THR A  14      -5.094  72.296  52.959  1.00 61.51      A
ATOM     57  CG2  THR A  14      -4.686  72.684  50.617  1.00 61.51      A
ATOM     58  C    THR A  14      -3.168  70.184  50.447  1.00 59.31      A
ATOM     59  O    THR A  14      -2.124  70.818  50.290  1.00 59.31      A
ATOM     60  N    THR A  15      -3.586  69.255  49.582  1.00 99.60      A
ATOM     61  CA   THR A  15      -2.809  68.870  48.396  1.00 99.60      A
ATOM     62  CB   THR A  15      -3.093  67.393  47.999  1.00 63.08      A
ATOM     63  OG1  THR A  15      -2.281  67.041  46.875  1.00 63.08      A
ATOM     64  CG2  THR A  15      -4.566  67.188  47.645  1.00 63.08      A
ATOM     65  C    THR A  15      -2.928  69.749  47.139  1.00 99.60      A
ATOM     66  O    THR A  15      -2.776  70.970  47.200  1.00 99.60      A
ATOM     67  N    GLN A  16      -3.187  69.120  45.997  1.00 86.73      A
ATOM     68  CA   GLN A  16      -3.299  69.833  44.733  1.00 86.73      A
ATOM     69  CB   GLN A  16      -2.026  70.664  44.527  1.00 99.43      A
ATOM     70  CG   GLN A  16      -1.992  71.545  43.289  1.00 99.43      A
ATOM     71  CD   GLN A  16      -3.015  72.660  43.323  1.00 99.43      A
ATOM     72  OE1  GLN A  16      -3.247  73.270  44.366  1.00 99.43      A
ATOM     73  NE2  GLN A  16      -3.620  72.946  42.173  1.00 99.43      A
ATOM     74  C    GLN A  16      -3.471  68.828  43.580  1.00 86.73      A
ATOM     75  O    GLN A  16      -4.194  67.831  43.700  1.00 86.73      A
ATOM     76  N    GLY A  17      -2.807  69.100  42.462  1.00100.07      A
ATOM     77  CA   GLY A  17      -2.882  68.214  41.319  1.00100.07      A
ATOM     78  C    GLY A  17      -1.503  67.656  41.035  1.00100.07      A
ATOM     79  O    GLY A  17      -1.334  66.592  40.433  1.00100.07      A
ATOM     80  N    ASP A  18      -0.506  68.399  41.487  1.00 44.89      A
ATOM     81  CA   ASP A  18       0.888  68.039  41.305  1.00 44.89      A
ATOM     82  CB   ASP A  18       1.133  67.484  39.902  1.00100.07      A
ATOM     83  CG   ASP A  18       0.675  68.439  38.815  1.00100.07      A
ATOM     84  OD1  ASP A  18      -0.544  68.692  38.724  1.00100.07      A
ATOM     85  OD2  ASP A  18       1.532  68.945  38.054  1.00100.07      A
ATOM     86  C    ASP A  18       1.577  69.383  41.457  1.00 44.89      A
ATOM     87  O    ASP A  18       2.127  69.939  40.507  1.00 44.89      A
ATOM     88  N    HIS A  19       1.502  69.919  42.667  1.00 68.86      A
ATOM     89  CA   HIS A  19       2.119  71.197  42.969  1.00 68.86      A
ATOM     90  CB   HIS A  19       1.223  72.365  42.553  1.00 74.00      A
ATOM     91  CG   HIS A  19       0.752  72.307  41.141  1.00 74.00      A
ATOM     92  CD2  HIS A  19      -0.494  72.351  40.616  1.00 74.00      A
ATOM     93  ND1  HIS A  19       1.617  72.232  40.074  1.00 74.00      A
ATOM     94  CE1  HIS A  19       0.924  72.234  38.950  1.00 74.00      A
ATOM     95  NE2  HIS A  19      -0.360  72.307  39.252  1.00 74.00      A
ATOM     96  C    HIS A  19       2.316  71.310  44.460  1.00 68.86      A
ATOM     97  O    HIS A  19       2.633  70.332  45.121  1.00 68.86      A
ATOM     98  N    TYR A  20       2.085  72.516  44.976  1.00 99.95      A
ATOM     99  CA   TYR A  20       2.253  72.802  46.387  1.00 99.95      A
ATOM    100  CB   TYR A  20       1.078  73.590  46.935  1.00 74.92      A
ATOM    101  CG   TYR A  20       1.149  75.062  46.652  1.00 74.92      A
ATOM    102  CD1  TYR A  20       0.943  75.554  45.359  1.00 74.92      A
ATOM    103  CE1  TYR A  20       0.938  76.932  45.100  1.00 74.92      A
ATOM    104  CD2  TYR A  20       1.366  75.980  47.686  1.00 74.92      A
ATOM    105  CE2  TYR A  20       1.366  77.357  47.442  1.00 74.92      A
ATOM    106  CZ   TYR A  20       1.147  77.826  46.148  1.00 74.92      A
ATOM    107  OH   TYR A  20       1.103  79.180  45.901  1.00 74.92      A
ATOM    108  C    TYR A  20       2.419  71.555  47.216  1.00 99.95      A
ATOM    109  O    TYR A  20       3.529  71.051  47.384  1.00 99.95      A
ATOM    110  N    GLY A  21       1.315  71.037  47.726  1.00 45.46      A
ATOM    111  CA   GLY A  21       1.427  69.850  48.542  1.00 45.46      A
ATOM    112  C    GLY A  21       1.726  70.270  49.963  1.00 45.46      A
ATOM    113  O    GLY A  21       2.474  69.612  50.678  1.00 45.46      A
ATOM    114  N    GLU A  22       1.159  71.398  50.368  1.00 35.21      A
ATOM    115  CA   GLU A  22       1.366  71.868  51.722  1.00 35.21      A
ATOM    116  CB   GLU A  22       0.490  73.088  51.988  1.00 81.30      A
ATOM    117  CG   GLU A  22       0.755  74.249  51.052  1.00 81.30      A
ATOM    118  CD   GLU A  22      -0.177  75.412  51.313  1.00 81.30      A
ATOM    119  OE1  GLU A  22      -0.505  75.638  52.497  1.00 81.30      A
ATOM    120  OE2  GLU A  22      -0.572  76.106  50.348  1.00 81.30      A
ATOM    121  C    GLU A  22       0.996  70.726  52.675  1.00 35.21      A
ATOM    122  O    GLU A  22      -0.143  70.283  52.696  1.00 35.21      A
ATOM    123  N    PHE A  23       1.941  70.213  53.443  1.00 32.98      A
ATOM    124  CA   PHE A  23       1.585  69.147  54.359  1.00 32.98      A
ATOM    125  CB   PHE A  23       2.382  67.904  54.023  1.00 49.28      A
ATOM    126  CG   PHE A  23       2.300  67.536  52.591  1.00 49.28      A
ATOM    127  CD1  PHE A  23       1.085  67.579  51.927  1.00 49.28      A
ATOM    128  CD2  PHE A  23       3.426  67.159  51.887  1.00 49.28      A
ATOM    129  CE1  PHE A  23       0.989  67.251  50.559  1.00 49.28      A
ATOM    130  CE2  PHE A  23       3.347  66.826  50.517  1.00 49.28      A
```

```
ATOM    131  CZ   PHE A  23       2.125  66.873  49.855  1.00 49.28      A
ATOM    132  C    PHE A  23       1.849  69.610  55.775  1.00 32.98      A
ATOM    133  O    PHE A  23       2.958  70.018  56.105  1.00 32.98      A
ATOM    134  N    VAL A  24       0.828  69.552  56.621  1.00100.03      A
ATOM    135  CA   VAL A  24       0.982  70.049  57.979  1.00100.03      A
ATOM    136  CB   VAL A  24       0.010  71.190  58.264  1.00 18.08      A
ATOM    137  CG1  VAL A  24       0.513  71.953  59.436  1.00 18.08      A
ATOM    138  CG2  VAL A  24      -0.153  72.093  57.043  1.00 18.08      A
ATOM    139  C    VAL A  24       0.837  69.105  59.154  1.00100.03      A
ATOM    140  O    VAL A  24      -0.154  68.389  59.289  1.00100.03      A
ATOM    141  N    LEU A  25       1.835  69.141  60.024  1.00 70.43      A
ATOM    142  CA   LEU A  25       1.806  68.359  61.240  1.00 70.43      A
ATOM    143  CB   LEU A  25       3.193  68.286  61.851  1.00 75.51      A
ATOM    144  CG   LEU A  25       3.742  66.876  61.936  1.00 75.51      A
ATOM    145  CD1  LEU A  25       5.146  66.912  62.490  1.00 75.51      A
ATOM    146  CD2  LEU A  25       2.845  66.056  62.820  1.00 75.51      A
ATOM    147  C    LEU A  25       0.932  69.269  62.076  1.00 70.43      A
ATOM    148  O    LEU A  25      -0.045  69.820  61.566  1.00 70.43      A
ATOM    149  N    GLU A  26       1.281  69.459  63.343  1.00100.07      A
ATOM    150  CA   GLU A  26       0.486  70.341  64.188  1.00100.07      A
ATOM    151  CB   GLU A  26      -0.931  69.788  64.324  1.00 33.20      A
ATOM    152  CG   GLU A  26      -1.963  70.760  63.848  1.00 33.20      A
ATOM    153  CD   GLU A  26      -1.722  72.117  64.439  1.00 33.20      A
ATOM    154  OE1  GLU A  26      -1.411  72.153  65.653  1.00 33.20      A
ATOM    155  OE2  GLU A  26      -1.840  73.128  63.701  1.00 33.20      A
ATOM    156  C    GLU A  26       1.131  70.604  65.551  1.00100.07      A
ATOM    157  O    GLU A  26       2.210  71.194  65.606  1.00100.07      A
ATOM    158  N    PRO A  27       0.503  70.181  66.666  1.00 46.06      A
ATOM    159  CD   PRO A  27      -0.442  69.092  66.971  1.00 30.49      A
ATOM    160  CA   PRO A  27       1.258  70.517  67.871  1.00 46.06      A
ATOM    161  CB   PRO A  27       0.380  69.974  68.972  1.00 30.49      A
ATOM    162  CG   PRO A  27      -0.016  68.670  68.386  1.00 30.49      A
ATOM    163  C    PRO A  27       2.581  69.773  67.809  1.00 46.06      A
ATOM    164  O    PRO A  27       2.652  68.650  67.307  1.00 46.06      A
ATOM    165  N    LEU A  28       3.624  70.401  68.326  1.00100.07      A
ATOM    166  CA   LEU A  28       4.946  69.802  68.322  1.00100.07      A
ATOM    167  CB   LEU A  28       5.558  69.950  66.921  1.00 56.66      A
ATOM    168  CG   LEU A  28       4.960  69.040  65.843  1.00 56.66      A
ATOM    169  CD1  LEU A  28       5.190  69.595  64.443  1.00 56.66      A
ATOM    170  CD2  LEU A  28       5.575  67.660  66.011  1.00 56.66      A
ATOM    171  C    LEU A  28       5.761  70.556  69.364  1.00100.07      A
ATOM    172  O    LEU A  28       6.266  71.650  69.100  1.00100.07      A
ATOM    173  N    GLU A  29       5.866  69.966  70.552  1.00 99.76      A
ATOM    174  CA   GLU A  29       6.590  70.576  71.655  1.00 99.76      A
ATOM    175  CB   GLU A  29       6.947  69.505  72.693  1.00100.07      A
ATOM    176  CG   GLU A  29       5.680  68.888  73.315  1.00100.07      A
ATOM    177  CD   GLU A  29       5.952  67.897  74.434  1.00100.07      A
ATOM    178  OE1  GLU A  29       6.663  66.897  74.190  1.00100.07      A
ATOM    179  OE2  GLU A  29       5.441  68.118  75.556  1.00100.07      A
ATOM    180  C    GLU A  29       7.805  71.360  71.175  1.00 99.76      A
ATOM    181  O    GLU A  29       8.707  70.830  70.528  1.00 99.76      A
ATOM    182  N    ARG A  30       7.768  72.653  71.470  1.00 78.24      A
ATOM    183  CA   ARG A  30       8.799  73.609  71.102  1.00 78.24      A
ATOM    184  CB   ARG A  30       8.934  74.646  72.225  1.00100.07      A
ATOM    185  CG   ARG A  30       9.973  75.730  71.982  1.00100.07      A
ATOM    186  CD   ARG A  30       9.413  77.113  72.296  1.00100.07      A
ATOM    187  NE   ARG A  30      10.388  78.166  72.021  1.00100.07      A
ATOM    188  CZ   ARG A  30      10.064  79.418  71.722  1.00100.07      A
ATOM    189  NH1  ARG A  30       8.786  79.770  71.658  1.00100.07      A
ATOM    190  NH2  ARG A  30      11.016  80.311  71.481  1.00100.07 -    A
ATOM    191  C    ARG A  30      10.167  73.030  70.773  1.00 78.24      A
ATOM    192  O    ARG A  30      10.859  72.509  71.651  1.00 78.24      A
ATOM    193  N    GLY A  31      10.549  73.125  69.502  1.00 82.60      A
ATOM    194  CA   GLY A  31      11.854  72.646  69.095  1.00 82.60      A
ATOM    195  C    GLY A  31      11.892  71.458  68.174  1.00 82.60      A
ATOM    196  O    GLY A  31      12.842  70.682  68.217  1.00 82.60      A
ATOM    197  N    PHE A  32      10.870  71.301  67.346  1.00 70.02      A
ATOM    198  CA   PHE A  32      10.843  70.184  66.413  1.00 70.02      A
ATOM    199  CB   PHE A  32       9.910  69.080  66.905  1.00 38.84      A
ATOM    200  CG   PHE A  32      10.558  68.106  67.843  1.00 38.84      A
ATOM    201  CD1  PHE A  32      10.952  68.494  69.116  1.00 38.84      A
ATOM    202  CD2  PHE A  32      10.728  66.788  67.474  1.00 38.84      A
ATOM    203  CE1  PHE A  32      11.500  67.571  70.013  1.00 38.84      A
ATOM    204  CE2  PHE A  32      11.274  65.862  68.364  1.00 38.84      A
ATOM    205  CZ   PHE A  32      11.657  66.255  69.634  1.00 38.84      A
ATOM    206  C    PHE A  32      10.403  70.661  65.041  1.00 70.02      A
ATOM    207  O    PHE A  32      10.872  70.158  64.020  1.00 70.02      A
ATOM    208  N    GLY A  33       9.507  71.642  65.019  1.00 52.43      A
ATOM    209  CA   GLY A  33       9.022  72.160  63.754  1.00 52.43      A
ATOM    210  C    GLY A  33      10.150  72.311  62.758  1.00 52.43      A
ATOM    211  O    GLY A  33       9.926  72.368  61.550  1.00 52.43      A
ATOM    212  N    VAL A  34      11.371  72.386  63.279  1.00 71.93      A
ATOM    213  CA   VAL A  34      12.560  72.495  62.451  1.00 71.93      A
ATOM    214  CB   VAL A  34      13.449  73.635  62.897  1.00 70.76      A
```

-3-

```
ATOM    215  CG1 VAL A  34      12.679  74.928  62.857  1.00 70.76          A
ATOM    216  CG2 VAL A  34      13.962  73.349  64.280  1.00 70.76          A
ATOM    217  C   VAL A  34      13.356  71.201  62.560  1.00 71.93          A
ATOM    218  O   VAL A  34      13.984  70.771  61.596  1.00 71.93          A
ATOM    219  N   THR A  35      13.328  70.584  63.737  1.00 58.19          A
ATOM    220  CA  THR A  35      14.040  69.329  63.952  1.00 58.19          A
ATOM    221  CB  THR A  35      13.727  68.750  65.344  1.00 96.03          A
ATOM    222  OG1 THR A  35      14.468  69.479  66.330  1.00 96.03          A
ATOM    223  CG2 THR A  35      14.097  67.278  65.416  1.00 96.03          A
ATOM    224  C   THR A  35      13.690  68.295  62.881  1.00 58.19          A
ATOM    225  O   THR A  35      14.418  67.317  62.682  1.00 58.19          A
ATOM    226  N   LEU A  36      12.580  68.509  62.183  1.00 45.88          A
ATOM    227  CA  LEU A  36      12.201  67.580  61.134  1.00 45.88          A
ATOM    228  CB  LEU A  36      11.105  66.616  61.617  1.00 72.17          A
ATOM    229  CG  LEU A  36       9.905  67.087  62.438  1.00 72.17          A
ATOM    230  CD1 LEU A  36       8.883  65.962  62.562  1.00 72.17          A
ATOM    231  CD2 LEU A  36      10.379  67.502  63.809  1.00 72.17          A
ATOM    232  C   LEU A  36      11.793  68.227  59.820  1.00 45.88          A
ATOM    233  O   LEU A  36      12.138  67.725  58.752  1.00 45.88          A
ATOM    234  N   GLY A  37      11.077  69.342  59.888  1.00100.07          A
ATOM    235  CA  GLY A  37      10.649  69.998  58.666  1.00100.07          A
ATOM    236  C   GLY A  37      11.797  70.359  57.744  1.00100.07          A
ATOM    237  O   GLY A  37      11.598  70.576  56.549  1.00100.07          A
ATOM    238  N   ASN A  38      13.006  70.411  58.289  1.00 62.51          A
ATOM    239  CA  ASN A  38      14.175  70.767  57.495  1.00 62.51          A
ATOM    240  CB  ASN A  38      15.222  71.433  58.389  1.00 44.82          A
ATOM    241  CG  ASN A  38      16.323  72.078  57.600  1.00 44.82          A
ATOM    242  OD1 ASN A  38      17.140  71.392  57.002  1.00 44.82          A
ATOM    243  ND2 ASN A  38      16.345  73.410  57.582  1.00 44.82          A
ATOM    244  C   ASN A  38      14.810  69.612  56.715  1.00 62.51          A
ATOM    245  O   ASN A  38      14.766  69.608  55.485  1.00 62.51          A
ATOM    246  N   PRO A  39      15.403  68.618  57.413  1.00 32.75          A
ATOM    247  CD  PRO A  39      15.306  68.316  58.852  1.00 32.40          A
ATOM    248  CA  PRO A  39      16.025  67.496  56.706  1.00 32.75          A
ATOM    249  CB  PRO A  39      16.090  66.408  57.768  1.00 32.40          A
ATOM    250  CG  PRO A  39      16.281  67.167  59.007  1.00 32.40          A
ATOM    251  C   PRO A  39      15.153  67.093  55.542  1.00 32.75          A
ATOM    252  O   PRO A  39      15.644  66.776  54.456  1.00 32.75          A
ATOM    253  N   LEU A  40      13.845  67.112  55.776  1.00 61.43          A
ATOM    254  CA  LEU A  40      12.903  66.745  54.733  1.00 61.43          A
ATOM    255  CB  LEU A  40      11.464  67.042  55.183  1.00 62.67          A
ATOM    256  CG  LEU A  40      11.008  66.513  56.555  1.00 62.67          A
ATOM    257  CD1 LEU A  40       9.508  66.718  56.683  1.00 62.67          A
ATOM    258  CD2 LEU A  40      11.345  65.039  56.723  1.00 62.67          A
ATOM    259  C   LEU A  40      13.283  67.576  53.514  1.00 61.43          A
ATOM    260  O   LEU A  40      13.648  67.027  52.472  1.00 61.43          A
ATOM    261  N   ALA A  41      13.235  68.899  53.674  1.00 76.41          A
ATOM    262  CA  ALA A  41      13.570  69.831  52.598  1.00 76.41          A
ATOM    263  CB  ALA A  41      13.664  71.271  53.135  1.00 17.66          A
ATOM    264  C   ALA A  41      14.888  69.424  51.965  1.00 76.41          A
ATOM    265  O   ALA A  41      14.999  69.288  50.743  1.00 76.41          A
ATOM    266  N   ARG A  42      15.891  69.241  52.811  1.00 55.18          A
ATOM    267  CA  ARG A  42      17.195  68.835  52.331  1.00 55.18          A
ATOM    268  CB  ARG A  42      18.081  68.423  53.505  1.00 50.68          A
ATOM    269  CG  ARG A  42      18.327  69.551  54.476  1.00 50.68          A
ATOM    270  CD  ARG A  42      19.592  70.268  54.136  1.00 50.68          A
ATOM    271  NE  ARG A  42      20.706  69.661  54.843  1.00 50.68          A
ATOM    272  CZ  ARG A  42      21.938  69.590  54.361  1.00 50.68          A
ATOM    273  NH1 ARG A  42      22.213  70.085  53.156  1.00 50.68          A
ATOM    274  NH2 ARG A  42      22.895  69.034  55.095  1.00 50.68          A
ATOM    275  C   ARG A  42      16.918  67.642  51.432  1.00 55.18          A
ATOM    276  O   ARG A  42      16.989  67.750  50.209  1.00 55.18          A
ATOM    277  N   ILE A  43      16.561  66.520  52.051  1.00 20.10          A
ATOM    278  CA  ILE A  43      16.269  65.302  51.317  1.00 20.10          A
ATOM    279  CB  ILE A  43      15.440  64.319  52.162  1.00 22.38          A
ATOM    280  CG2 ILE A  43      15.404  62.952  51.482  1.00 22.38          A
ATOM    281  CG1 ILE A  43      16.062  64.166  53.541  1.00 22.38          A
ATOM    282  CD  ILE A  43      17.339  63.403  53.534  1.00 22.38          A
ATOM    283  C   ILE A  43      15.468  65.641  50.066  1.00 20.10          A
ATOM    284  O   ILE A  43      15.890  65.356  48.943  1.00 20.10          A
ATOM    285  N   LEU A  44      14.310  66.260  50.281  1.00 46.55          A
ATOM    286  CA  LEU A  44      13.419  66.648  49.196  1.00 46.55          A
ATOM    287  CB  LEU A  44      12.410  67.689  49.686  1.00 52.98          A
ATOM    288  CG  LEU A  44      11.436  67.147  50.731  1.00 52.98          A
ATOM    289  CD1 LEU A  44      10.608  68.269  51.320  1.00 52.98          A
ATOM    290  CD2 LEU A  44      10.550  66.110  50.077  1.00 52.98          A
ATOM    291  C   LEU A  44      14.189  67.204  48.002  1.00 46.55          A
ATOM    292  O   LEU A  44      14.084  66.692  46.881  1.00 46.55          A
ATOM    293  N   LEU A  45      14.970  68.250  48.247  1.00 40.73          A
ATOM    294  CA  LEU A  45      15.757  68.877  47.192  1.00 40.73          A
ATOM    295  CB  LEU A  45      16.322  70.203  47.690  1.00 25.17          A
ATOM    296  CG  LEU A  45      15.338  71.271  48.150  1.00 25.17          A
ATOM    297  CD1 LEU A  45      16.096  72.346  48.868  1.00 25.17          A
ATOM    298  CD2 LEU A  45      14.609  71.867  46.976  1.00 25.17          A
```

```
ATOM    299  C    LEU A  45      16.914  67.985  46.744  1.00 40.73       A
ATOM    300  O    LEU A  45      17.466  68.168  45.660  1.00 40.73       A
ATOM    301  N    SER A  46      17.270  67.023  47.592  1.00 49.02       A
ATOM    302  CA   SER A  46      18.375  66.112  47.326  1.00 49.02       A
ATOM    303  CB   SER A  46      19.145  65.831  48.619  1.00100.07       A
ATOM    304  OG   SER A  46      19.335  67.007  49.381  1.00100.07       A
ATOM    305  C    SER A  46      17.915  64.782  46.753  1.00 49.02       A
ATOM    306  O    SER A  46      17.264  64.709  45.714  1.00 49.02       A
ATOM    307  N    SER A  47      18.276  63.726  47.461  1.00 43.33       A
ATOM    308  CA   SER A  47      17.935  62.367  47.083  1.00 43.33       A
ATOM    309  CB   SER A  47      18.397  61.419  48.196  1.00 99.93       A
ATOM    310  OG   SER A  47      19.629  61.851  48.751  1.00 99.93       A
ATOM    311  C    SER A  47      16.435  62.137  46.802  1.00 43.33       A
ATOM    312  O    SER A  47      15.624  62.121  47.733  1.00 43.33       A
ATOM    313  N    ILE A  48      16.073  61.959  45.531  1.00 85.43       A
ATOM    314  CA   ILE A  48      14.684  61.695  45.128  1.00 85.43       A
ATOM    315  CB   ILE A  48      13.746  62.916  45.278  1.00 25.46       A
ATOM    316  CG2  ILE A  48      12.484  62.694  44.442  1.00 25.46       A
ATOM    317  CG1  ILE A  48      13.377  63.159  46.745  1.00 25.46       A
ATOM    318  CD   ILE A  48      12.100  62.507  47.206  1.00 25.46       A
ATOM    319  C    ILE A  48      14.616  61.324  43.660  1.00 85.43       A
ATOM    320  O    ILE A  48      14.911  62.151  42.796  1.00 85.43       A
ATOM    321  N    PRO A  49      14.191  60.089  43.354  1.00 54.50       A
ATOM    322  CD   PRO A  49      13.855  59.002  44.287  1.00 98.88       A
ATOM    323  CA   PRO A  49      14.090  59.628  41.968  1.00 54.50       A
ATOM    324  CB   PRO A  49      13.472  58.243  42.115  1.00 98.88       A
ATOM    325  CG   PRO A  49      14.029  57.779  43.417  1.00 98.88       A
ATOM    326  C    PRO A  49      13.235  60.555  41.113  1.00 54.50       A
ATOM    327  O    PRO A  49      12.143  60.947  41.518  1.00 54.50       A
ATOM    328  N    GLY A  50      13.749  60.903  39.937  1.00 44.57       A
ATOM    329  CA   GLY A  50      13.041  61.776  39.021  1.00 44.57       A
ATOM    330  C    GLY A  50      13.338  61.313  37.613  1.00 44.57       A
ATOM    331  O    GLY A  50      13.775  60.182  37.424  1.00 44.57       A
ATOM    332  N    THR A  51      13.134  62.178  36.624  1.00 54.82       A
ATOM    333  CA   THR A  51      13.368  61.808  35.229  1.00 54.82       A
ATOM    334  CB   THR A  51      12.086  61.266  34.624  1.00 88.12       A
ATOM    335  OG1  THR A  51      11.121  62.326  34.566  1.00 88.12       A
ATOM    336  CG2  THR A  51      11.528  60.129  35.480  1.00 88.12       A
ATOM    337  C    THR A  51      13.793  63.019  34.397  1.00 54.82       A
ATOM    338  O    THR A  51      13.311  64.123  34.624  1.00 54.82       A
ATOM    339  N    ALA A  52      14.680  62.812  33.425  1.00 32.19       A
ATOM    340  CA   ALA A  52      15.134  63.907  32.571  1.00 32.19       A
ATOM    341  CB   ALA A  52      16.008  64.856  33.371  1.00100.07       A
ATOM    342  C    ALA A  52      15.876  63.456  31.313  1.00 32.19       A
ATOM    343  O    ALA A  52      16.463  62.375  31.280  1.00 32.19       A
ATOM    344  N    VAL A  53      15.847  64.298  30.282  1.00 31.84       A
ATOM    345  CA   VAL A  53      16.510  64.001  29.016  1.00 31.84       A
ATOM    346  CB   VAL A  53      16.542  65.251  28.123  1.00 36.17       A
ATOM    347  CG1  VAL A  53      17.906  65.430  27.504  1.00 36.17       A
ATOM    348  CG2  VAL A  53      15.501  65.126  27.036  1.00 36.17       A
ATOM    349  C    VAL A  53      17.930  63.524  29.281  1.00 31.84       A
ATOM    350  O    VAL A  53      18.460  63.735  30.365  1.00 31.84       A
ATOM    351  N    THR A  54      18.562  62.900  28.294  1.00 38.47       A
ATOM    352  CA   THR A  54      19.915  62.400  28.495  1.00 38.47       A
ATOM    353  CB   THR A  54      19.866  60.958  28.965  1.00 69.18       A
ATOM    354  OG1  THR A  54      18.933  60.849  30.043  1.00 69.18       A
ATOM    355  CG2  THR A  54      21.238  60.497  29.413  1.00 69.18       A
ATOM    356  C    THR A  54      20.810  62.434  27.264  1.00 38.47       A
ATOM    357  O    THR A  54      22.038  62.464  27.391  1.00 38.47       A
ATOM    358  N    SER A  55      20.192  62.403  26.082  1.00 48.54       A
ATOM    359  CA   SER A  55      20.919  62.424  24.810  1.00 48.54       A
ATOM    360  CB   SER A  55      21.768  61.157  24.684  1.00 72.28       A
ATOM    361  OG   SER A  55      22.265  61.011  23.369  1.00 72.28       A
ATOM    362  C    SER A  55      19.970  62.520  23.611  1.00 48.54       A
ATOM    363  O    SER A  55      18.924  61.864  23.582  1.00 48.54       A
ATOM    364  N    VAL A  56      20.331  63.334  22.622  1.00 74.20       A
ATOM    365  CA   VAL A  56      19.483  63.476  21.440  1.00 74.20       A
ATOM    366  CB   VAL A  56      18.765  64.875  21.357  1.00 15.45       A
ATOM    367  CG1  VAL A  56      18.329  65.339  22.717  1.00 15.45       A
ATOM    368  CG2  VAL A  56      19.664  65.896  20.712  1.00 15.45       A
ATOM    369  C    VAL A  56      20.216  63.290  20.120  1.00 74.20       A
ATOM    370  O    VAL A  56      21.439  63.384  20.048  1.00 74.20       A
ATOM    371  N    TYR A  57      19.439  63.014  19.079  1.00 62.63       A
ATOM    372  CA   TYR A  57      19.954  62.864  17.731  1.00 62.63       A
ATOM    373  CB   TYR A  57      19.964  61.401  17.266  1.00 52.17       A
ATOM    374  CG   TYR A  57      20.310  61.202  15.788  1.00 52.17       A
ATOM    375  CD1  TYR A  57      20.875  60.010  15.335  1.00 52.17       A
ATOM    376  CE1  TYR A  57      21.190  59.822  13.980  1.00 52.17       A
ATOM    377  CD2  TYR A  57      20.065  62.199  14.844  1.00 52.17       A
ATOM    378  CE2  TYR A  57      20.371  62.022  13.492  1.00 52.17       A
ATOM    379  CZ   TYR A  57      20.935  60.837  13.066  1.00 52.17       A
ATOM    380  OH   TYR A  57      21.253  60.688  11.732  1.00 52.17       A
ATOM    381  C    TYR A  57      18.991  63.644  16.881  1.00 62.63       A
ATOM    382  O    TYR A  57      17.850  63.227  16.690  1.00 62.63       A
```

-5-

```
ATOM    383  N    ILE A  58      19.444  64.793  16.399  1.00 40.99       A
ATOM    384  CA   ILE A  58      18.623  65.611  15.519  1.00 40.99       A
ATOM    385  CB   ILE A  58      18.849  67.138  15.730  1.00 48.67       A
ATOM    386  CG2  ILE A  58      17.754  67.919  15.058  1.00 48.67       A
ATOM    387  CG1  ILE A  58      18.808  67.490  17.209  1.00 48.67       A
ATOM    388  CD   ILE A  58      20.002  66.996  17.960  1.00 48.67       A
ATOM    389  C    ILE A  58      19.166  65.206  14.148  1.00 40.99       A
ATOM    390  O    ILE A  58      20.378  65.247  13.930  1.00 40.99       A
ATOM    391  N    GLU A  59      18.286  64.789  13.241  1.00100.07       A
ATOM    392  CA   GLU A  59      18.698  64.361  11.903  1.00100.07       A
ATOM    393  CB   GLU A  59      17.461  64.209  11.008  1.00100.07       A
ATOM    394  CG   GLU A  59      17.757  63.710   9.605  1.00100.07       A
ATOM    395  CD   GLU A  59      17.088  62.377   9.299  1.00100.07       A
ATOM    396  OE1  GLU A  59      17.258  61.420  10.086  1.00100.07       A
ATOM    397  OE2  GLU A  59      16.396  62.285   8.264  1.00100.07       A
ATOM    398  C    GLU A  59      19.683  65.326  11.243  1.00100.07       A
ATOM    399  O    GLU A  59      19.293  66.422  10.835  1.00100.07       A
ATOM    400  N    ASP A  60      20.947  64.901  11.150  1.00100.07       A
ATOM    401  CA   ASP A  60      22.050  65.669  10.544  1.00100.07       A
ATOM    402  CB   ASP A  60      21.514  66.695   9.536  1.00 81.65       A
ATOM    403  CG   ASP A  60      20.699  66.058   8.429  1.00 81.65       A
ATOM    404  OD1  ASP A  60      21.295  65.438   7.526  1.00 81.65       A
ATOM    405  OD2  ASP A  60      19.457  66.170   8.465  1.00 81.65       A
ATOM    406  C    ASP A  60      22.969  66.394  11.539  1.00100.07       A
ATOM    407  O    ASP A  60      22.543  66.839  12.606  1.00100.07       A
ATOM    408  N    VAL A  61      24.239  66.507  11.157  1.00 87.49       A
ATOM    409  CA   VAL A  61      25.279  67.175  11.944  1.00 87.49       A
ATOM    410  CB   VAL A  61      25.121  68.709  11.901  1.00 76.95       A
ATOM    411  CG1  VAL A  61      26.437  69.359  12.288  1.00 76.95       A
ATOM    412  CG2  VAL A  61      24.679  69.160  10.516  1.00 76.95       A
ATOM    413  C    VAL A  61      25.392  66.763  13.401  1.00 87.49       A
ATOM    414  O    VAL A  61      24.406  66.751  14.140  1.00 87.49       A
ATOM    415  N    LEU A  62      26.611  66.427  13.808  1.00 69.94       A
ATOM    416  CA   LEU A  62      26.859  66.051  15.191  1.00 69.94       A
ATOM    417  CB   LEU A  62      27.936  64.971  15.280  1.00 99.97       A
ATOM    418  CG   LEU A  62      29.229  65.175  14.498  1.00 99.97       A
ATOM    419  CD1  LEU A  62      30.181  64.026  14.818  1.00 99.97       A
ATOM    420  CD2  LEU A  62      28.936  65.237  13.002  1.00 99.97       A
ATOM    421  C    LEU A  62      27.275  67.293  15.966  1.00 69.94       A
ATOM    422  O    LEU A  62      26.962  68.411  15.553  1.00 69.94       A
ATOM    423  N    HIS A  63      27.987  67.094  17.071  1.00 43.02       A
ATOM    424  CA   HIS A  63      28.420  68.187  17.939  1.00 43.02       A
ATOM    425  CB   HIS A  63      29.691  68.855  17.388  1.00100.07       A
ATOM    426  CG   HIS A  63      29.495  69.617  16.115  1.00100.07       A
ATOM    427  CD2  HIS A  63      30.027  69.439  14.883  1.00100.07       A
ATOM    428  ND1  HIS A  63      28.726  70.757  16.039  1.00100.07       A
ATOM    429  CE1  HIS A  63      28.799  71.251  14.815  1.00100.07       A
ATOM    430  NE2  HIS A  63      29.582  70.471  14.094  1.00100.07       A
ATOM    431  C    HIS A  63      27.319  69.220  18.223  1.00 43.02       A
ATOM    432  O    HIS A  63      26.556  69.622  17.344  1.00 43.02       A
ATOM    433  N    GLU A  64      27.235  69.621  19.484  1.00 83.05       A
ATOM    434  CA   GLU A  64      26.243  70.580  19.932  1.00 83.05       A
ATOM    435  CB   GLU A  64      26.253  70.639  21.463  1.00 95.17       A
ATOM    436  CG   GLU A  64      25.040  71.323  22.070  1.00 95.17       A
ATOM    437  CD   GLU A  64      25.059  71.329  23.587  1.00 95.17       A
ATOM    438  OE1  GLU A  64      25.330  70.265  24.189  1.00 95.17       A
ATOM    439  OE2  GLU A  64      24.788  72.397  24.176  1.00 95.17       A
ATOM    440  C    GLU A  64      26.506  71.969  19.364  1.00 83.05       A
ATOM    441  O    GLU A  64      25.830  72.919  19.734  1.00 83.05       A
ATOM    442  N    PHE A  65      27.477  72.097  18.465  1.00 17.45       A
ATOM    443  CA   PHE A  65      27.794  73.409  17.884  1.00 17.45       A
ATOM    444  CB   PHE A  65      29.272  73.719  18.095  1.00 18.31       A
ATOM    445  CG   PHE A  65      29.709  73.551  19.508  1.00 18.31       A
ATOM    446  CD1  PHE A  65      29.899  72.295  20.040  1.00 18.31       A
ATOM    447  CD2  PHE A  65      29.873  74.648  20.331  1.00 18.31       A
ATOM    448  CE1  PHE A  65      30.243  72.135  21.367  1.00 18.31       A
ATOM    449  CE2  PHE A  65      30.215  74.487  21.657  1.00 18.31       A
ATOM    450  CZ   PHE A  65      30.399  73.227  22.170  1.00 18.31       A
ATOM    451  C    PHE A  65      27.463  73.526  16.402  1.00 17.45       A
ATOM    452  O    PHE A  65      28.275  74.024  15.619  1.00 17.45       A
ATOM    453  N    SER A  66      26.268  73.079  16.023  1.00 52.72       A
ATOM    454  CA   SER A  66      25.846  73.092  14.624  1.00 52.72       A
ATOM    455  CB   SER A  66      25.300  71.711  14.251  1.00 48.15       A
ATOM    456  OG   SER A  66      26.072  70.662  14.825  1.00 48.15       A
ATOM    457  C    SER A  66      24.768  74.139  14.351  1.00 52.72       A
ATOM    458  O    SER A  66      24.640  75.117  15.084  1.00 52.72       A
ATOM    459  N    THR A  67      23.996  73.927  13.288  1.00 44.34       A
ATOM    460  CA   THR A  67      22.920  74.843  12.922  1.00 44.34       A
ATOM    461  CB   THR A  67      23.470  76.169  12.362  1.00 40.81       A
ATOM    462  OG1  THR A  67      22.381  76.976  11.891  1.00 40.81       A
ATOM    463  CG2  THR A  67      24.449  75.907  11.221  1.00 40.81       A
ATOM    464  C    THR A  67      21.976  74.228  11.887  1.00 44.34       A
ATOM    465  O    THR A  67      22.298  74.178  10.701  1.00 44.34       A
ATOM    466  N    ILE A  68      20.808  73.766  12.336  1.00 68.89       A
```

```
ATOM    467  CA   ILE A  68      19.825  73.136  11.444  1.00 68.89      A
ATOM    468  CB   ILE A  68      18.866  72.182  12.216  1.00 47.46      A
ATOM    469  CG2  ILE A  68      18.420  71.048  11.306  1.00 47.46      A
ATOM    470  CG1  ILE A  68      19.574  71.570  13.424  1.00 47.46      A
ATOM    471  CD   ILE A  68      18.671  70.752  14.283  1.00 47.46      A
ATOM    472  C    ILE A  68      18.962  74.172  10.719  1.00 68.89      A
ATOM    473  O    ILE A  68      18.215  74.927  11.348  1.00 68.89      A
ATOM    474  N    PRO A  69      19.035  74.189   9.375  1.00 69.72      A
ATOM    475  CD   PRO A  69      19.754  73.147   8.619  1.00 34.85      A
ATOM    476  CA   PRO A  69      18.316  75.088   8.454  1.00 69.72      A
ATOM    477  CB   PRO A  69      18.767  74.604   7.077  1.00 34.85      A
ATOM    478  CG   PRO A  69      18.999  73.140   7.306  1.00 34.85      A
ATOM    479  C    PRO A  69      16.800  75.116   8.569  1.00 69.72      A
ATOM    480  O    PRO A  69      16.187  74.160   9.033  1.00 69.72      A
ATOM    481  N    GLY A  70      16.212  76.222   8.116  1.00 92.95      A
ATOM    482  CA   GLY A  70      14.772  76.388   8.174  1.00 92.95      A
ATOM    483  C    GLY A  70      14.338  76.526   9.618  1.00 92.95      A
ATOM    484  O    GLY A  70      13.167  76.771   9.905  1.00 92.95      A
ATOM    485  N    VAL A  71      15.296  76.377  10.528  1.00 56.58      A
ATOM    486  CA   VAL A  71      15.033  76.454  11.955  1.00 56.58      A
ATOM    487  CB   VAL A  71      15.624  75.233  12.690  1.00 36.59      A
ATOM    488  CG1  VAL A  71      15.017  75.097  14.074  1.00 36.59      A
ATOM    489  CG2  VAL A  71      15.422  73.988  11.876  1.00 36.59      A
ATOM    490  C    VAL A  71      15.712  77.683  12.536  1.00 56.58      A
ATOM    491  O    VAL A  71      16.927  77.701  12.689  1.00 56.58      A
ATOM    492  N    LYS A  72      14.928  78.700  12.869  1.00 65.96      A
ATOM    493  CA   LYS A  72      15.459  79.925  13.473  1.00 65.96      A
ATOM    494  CB   LYS A  72      14.290  80.823  13.902  1.00 99.92      A
ATOM    495  CG   LYS A  72      14.647  81.927  14.895  1.00 99.92      A
ATOM    496  CD   LYS A  72      13.387  82.534  15.506  1.00 99.92      A
ATOM    497  CE   LYS A  72      13.686  83.308  16.781  1.00 99.92      A
ATOM    498  NZ   LYS A  72      12.437  83.682  17.502  1.00 99.92      A
ATOM    499  C    LYS A  72      16.346  79.620  14.688  1.00 65.96      A
ATOM    500  O    LYS A  72      17.428  80.197  14.840  1.00 65.96      A
ATOM    501  N    GLU A  73      15.868  78.730  15.555  1.00 56.97      A
ATOM    502  CA   GLU A  73      16.607  78.315  16.744  1.00 56.97      A
ATOM    503  CB   GLU A  73      15.973  77.066  17.361  1.00 64.77      A
ATOM    504  CG   GLU A  73      15.259  77.297  18.646  1.00 64.77      A
ATOM    505  CD   GLU A  73      14.292  78.429  18.525  1.00 64.77      A
ATOM    506  OE1  GLU A  73      13.611  78.489  17.484  1.00 64.77      A
ATOM    507  OE2  GLU A  73      14.205  79.254  19.460  1.00 64.77      A
ATOM    508  C    GLU A  73      18.028  77.951  16.344  1.00 56.97      A
ATOM    509  O    GLU A  73      18.369  77.943  15.163  1.00 56.97      A
ATOM    510  N    ASP A  74      18.840  77.627  17.344  1.00 56.37      A
ATOM    511  CA   ASP A  74      20.227  77.213  17.143  1.00 56.37      A
ATOM    512  CB   ASP A  74      21.111  77.836  18.232  1.00 68.46      A
ATOM    513  CG   ASP A  74      22.589  77.652  17.969  1.00 68.46      A
ATOM    514  OD1  ASP A  74      23.082  76.509  18.057  1.00 68.46      A
ATOM    515  OD2  ASP A  74      23.260  78.663  17.675  1.00 68.46      A
ATOM    516  C    ASP A  74      20.176  75.695  17.301  1.00 56.37      A
ATOM    517  O    ASP A  74      19.332  75.039  16.700  1.00 56.37      A
ATOM    518  N    VAL A  75      21.064  75.132  18.107  1.00 47.58      A
ATOM    519  CA   VAL A  75      21.052  73.694  18.331  1.00 47.58      A
ATOM    520  CB   VAL A  75      22.004  72.915  17.374  1.00 71.89      A
ATOM    521  CG1  VAL A  75      21.598  73.139  15.923  1.00 71.89      A
ATOM    522  CG2  VAL A  75      23.438  73.342  17.593  1.00 71.89      A
ATOM    523  C    VAL A  75      21.480  73.467  19.761  1.00 47.58      A
ATOM    524  O    VAL A  75      21.212  72.415  20.341  1.00 47.58      A
ATOM    525  N    VAL A  76      22.150  74.470  20.325  1.00 47.65      A
ATOM    526  CA   VAL A  76      22.606  74.387  21.705  1.00 47.65      A
ATOM    527  CB   VAL A  76      23.711  75.429  22.029  1.00 53.08      A
ATOM    528  CG1  VAL A  76      24.565  74.932  23.186  1.00 53.08      A
ATOM    529  CG2  VAL A  76      24.561  75.700  20.806  1.00 53.08      A
ATOM    530  C    VAL A  76      21.361  74.716  22.502  1.00 47.65      A
ATOM    531  O    VAL A  76      20.969  73.976  23.415  1.00 47.65      A
ATOM    532  N    GLU A  77      20.738  75.833  22.118  1.00 51.13      A
ATOM    533  CA   GLU A  77      19.512  76.305  22.750  1.00 51.13      A
ATOM    534  CB   GLU A  77      18.912  77.446  21.935  1.00 99.63      A
ATOM    535  CG   GLU A  77      18.429  78.606  22.766  1.00 99.63      A
ATOM    536  CD   GLU A  77      17.254  79.306  22.125  1.00 99.63      A
ATOM    537  OE1  GLU A  77      16.118  78.791  22.241  1.00 99.63      A
ATOM    538  OE2  GLU A  77      17.469  80.362  21.493  1.00 99.63      A
ATOM    539  C    GLU A  77      18.566  75.106  22.752  1.00 51.13      A
ATOM    540  O    GLU A  77      18.148  74.627  23.805  1.00 51.13      A
ATOM    541  N    ILE A  78      18.239  74.623  21.557  1.00 41.27      A
ATOM    542  CA   ILE A  78      17.374  73.468  21.425  1.00 41.27      A
ATOM    543  CB   ILE A  78      17.596  72.782  20.080  1.00 44.04      A
ATOM    544  CG2  ILE A  78      16.831  71.480  20.035  1.00 44.04      A
ATOM    545  CG1  ILE A  78      17.197  73.735  18.951  1.00 44.04      A
ATOM    546  CD   ILE A  78      17.541  73.234  17.560  1.00 44.04      A
ATOM    547  C    ILE A  78      17.786  72.519  22.530  1.00 41.27      A
ATOM    548  O    ILE A  78      16.984  72.174  23.385  1.00 41.27      A
ATOM    549  N    ILE A  79      19.049  72.118  22.538  1.00 42.42      A
ATOM    550  CA   ILE A  79      19.491  71.211  23.576  1.00 42.42      A
```

-7-

```
ATOM    551  CB  ILE A  79      21.013  71.013  23.586  1.00 35.69      A
ATOM    552  CG2 ILE A  79      21.426  70.226  24.837  1.00 35.69      A
ATOM    553  CG1 ILE A  79      21.450  70.237  22.349  1.00 35.69      A
ATOM    554  CD  ILE A  79      21.040  68.792  22.370  1.00 35.69      A
ATOM    555  C   ILE A  79      19.089  71.752  24.927  1.00 42.42      A
ATOM    556  O   ILE A  79      18.740  70.980  25.811  1.00 42.42      A
ATOM    557  N   LEU A  80      19.136  73.074  25.084  1.00 70.11      A
ATOM    558  CA  LEU A  80      18.779  73.710  26.354  1.00 70.11      A
ATOM    559  CB  LEU A  80      19.257  75.173  26.380  1.00 34.05      A
ATOM    560  CG  LEU A  80      20.732  75.506  26.083  1.00 34.05      A
ATOM    561  CD1 LEU A  80      20.959  76.988  26.339  1.00 34.05      A
ATOM    562  CD2 LEU A  80      21.677  74.686  26.952  1.00 34.05      A
ATOM    563  C   LEU A  80      17.276  73.644  26.654  1.00 70.11      A
ATOM    564  O   LEU A  80      16.892  73.356  27.789  1.00 70.11      A
ATOM    565  N   ASN A  81      16.423  73.924  25.665  1.00 34.19      A
ATOM    566  CA  ASN A  81      14.981  73.826  25.903  1.00 34.19      A
ATOM    567  CB  ASN A  81      14.178  74.115  24.622  1.00 38.34      A
ATOM    568  CG  ASN A  81      14.037  75.611  24.326  1.00 38.34      A
ATOM    569  OD1 ASN A  81      14.858  76.211  23.631  1.00 38.34      A
ATOM    570  ND2 ASN A  81      12.984  76.215  24.859  1.00 38.34      A
ATOM    571  C   ASN A  81      14.754  72.381  26.350  1.00 34.19      A
ATOM    572  O   ASN A  81      14.429  72.100  27.508  1.00 34.19      A
ATOM    573  N   LEU A  82      14.976  71.473  25.407  1.00 59.07      A
ATOM    574  CA  LEU A  82      14.849  70.030  25.594  1.00 59.07      A
ATOM    575  CB  LEU A  82      15.567  69.353  24.409  1.00 58.84      A
ATOM    576  CG  LEU A  82      15.719  67.852  24.181  1.00 58.84      A
ATOM    577  CD1 LEU A  82      15.984  67.607  22.702  1.00 58.84      A
ATOM    578  CD2 LEU A  82      16.848  67.312  25.036  1.00 58.84      A
ATOM    579  C   LEU A  82      15.404  69.563  26.944  1.00 59.07      A
ATOM    580  O   LEU A  82      15.077  68.478  27.415  1.00 59.07      A
ATOM    581  N   LYS A  83      16.238  70.389  27.565  1.00 40.47      A
ATOM    582  CA  LYS A  83      16.819  70.056  28.860  1.00 40.47      A
ATOM    583  CB  LYS A  83      17.902  71.066  29.260  1.00 71.50      A
ATOM    584  CG  LYS A  83      19.280  70.837  28.666  1.00 71.50      A
ATOM    585  CD  LYS A  83      20.261  71.900  29.148  1.00 71.50      A
ATOM    586  CE  LYS A  83      20.472  71.818  30.645  1.00 71.50      A
ATOM    587  NZ  LYS A  83      21.299  72.948  31.147  1.00 71.50      A
ATOM    588  C   LYS A  83      15.739  70.082  29.928  1.00 40.47      A
ATOM    589  O   LYS A  83      15.774  69.300  30.885  1.00 40.47      A
ATOM    590  N   GLU A  84      14.791  71.002  29.767  1.00100.07      A
ATOM    591  CA  GLU A  84      13.698  71.163  30.719  1.00100.07      A
ATOM    592  CB  GLU A  84      13.113  72.561  30.617  1.00 99.88      A
ATOM    593  CG  GLU A  84      13.981  73.587  31.279  1.00 99.88      A
ATOM    594  CD  GLU A  84      13.730  74.954  30.735  1.00 99.88      A
ATOM    595  OE1 GLU A  84      12.552  75.369  30.714  1.00 99.88      A
ATOM    596  OE2 GLU A  84      14.710  75.609  30.326  1.00 99.88      A
ATOM    597  C   GLU A  84      12.599  70.134  30.557  1.00100.07      A
ATOM    598  O   GLU A  84      12.089  69.613  31.550  1.00100.07      A
ATOM    599  N   LEU A  85      12.229  69.856  29.311  1.00 31.70      A
ATOM    600  CA  LEU A  85      11.204  68.863  29.023  1.00 31.70      A
ATOM    601  CB  LEU A  85      11.528  68.157  27.705  1.00 36.11      A
ATOM    602  CG  LEU A  85      10.661  66.947  27.364  1.00 36.11      A
ATOM    603  CD1 LEU A  85       9.209  67.333  27.506  1.00 36.11      A
ATOM    604  CD2 LEU A  85      10.950  66.480  25.947  1.00 36.11      A
ATOM    605  C   LEU A  85      11.097  67.819  30.138  1.00 31.70      A
ATOM    606  O   LEU A  85      12.002  67.003  30.332  1.00 31.70      A
ATOM    607  N   VAL A  86       9.988  67.867  30.872  1.00 64.02      A
ATOM    608  CA  VAL A  86       9.746  66.938  31.967  1.00 64.02      A
ATOM    609  CB  VAL A  86       9.075  67.640  33.155  1.00 43.35      A
ATOM    610  CG1 VAL A  86       7.761  68.241  32.738  1.00 43.35      A
ATOM    611  CG2 VAL A  86       8.865  66.662  34.267  1.00 43.35      A
ATOM    612  C   VAL A  86       8.889  65.760  31.528  1.00 64.02      A
ATOM    613  O   VAL A  86       7.912  65.945  30.798  1.00 64.02      A
ATOM    614  N   VAL A  87       9.247  64.551  31.969  1.00 31.91      A
ATOM    615  CA  VAL A  87       8.491  63.355  31.584  1.00 31.91      A
ATOM    616  CB  VAL A  87       9.341  62.361  30.760  1.00 48.32      A
ATOM    617  CG1 VAL A  87       9.363  62.762  29.307  1.00 48.32      A
ATOM    618  CG2 VAL A  87      10.751  62.321  31.304  1.00 48.32      A
ATOM    619  C   VAL A  87       7.925  62.575  32.752  1.00 31.91      A
ATOM    620  O   VAL A  87       8.558  62.430  33.784  1.00 31.91      A
ATOM    621  N   ARG A  88       6.707  62.091  32.569  1.00 62.79      A
ATOM    622  CA  ARG A  88       6.028  61.273  33.557  1.00 62.79      A
ATOM    623  CB  ARG A  88       4.565  61.715  33.684  1.00 68.82      A
ATOM    624  CG  ARG A  88       3.661  60.775  34.489  1.00 68.82      A
ATOM    625  CD  ARG A  88       2.337  61.461  34.886  1.00 68.82      A
ATOM    626  NE  ARG A  88       1.402  60.584  35.594  1.00 68.82      A
ATOM    627  CZ  ARG A  88       1.705  59.860  36.671  1.00 68.82      A
ATOM    628  NH1 ARG A  88       0.785  59.099  37.239  1.00 68.82      A
ATOM    629  NH2 ARG A  88       2.928  59.880  37.184  1.00 68.82      A
ATOM    630  C   ARG A  88       6.131  59.906  32.892  1.00 62.79      A
ATOM    631  O   ARG A  88       5.583  59.699  31.811  1.00 62.79      A
ATOM    632  N   PHE A  89       6.842  58.980  33.524  1.00 88.02      A
ATOM    633  CA  PHE A  89       7.055  57.662  32.938  1.00 88.02      A
ATOM    634  CB  PHE A  89       8.420  57.135  33.409  1.00 36.30      A
```

-8-

```
ATOM    635  CG  PHE A  89       9.547  57.385  32.429  1.00 36.30      A
ATOM    636  CD1 PHE A  89       9.441  58.369  31.444  1.00 36.30      A
ATOM    637  CD2 PHE A  89      10.717  56.620  32.483  1.00 36.30      A
ATOM    638  CE1 PHE A  89      10.493  58.578  30.514  1.00 36.30      A
ATOM    639  CE2 PHE A  89      11.769  56.822  31.562  1.00 36.30      A
ATOM    640  CZ  PHE A  89      11.655  57.800  30.582  1.00 36.30      A
ATOM    641  C   PHE A  89       5.986  56.568  33.069  1.00 88.02      A
ATOM    642  O   PHE A  89       5.719  55.858  32.099  1.00 88.02      A
ATOM    643  N   LEU A  90       5.375  56.428  34.240  1.00100.03      A
ATOM    644  CA  LEU A  90       4.355  55.398  34.452  1.00100.03      A
ATOM    645  CB  LEU A  90       3.385  55.335  33.268  1.00 43.38      A
ATOM    646  CG  LEU A  90       2.587  56.623  33.037  1.00 43.38      A
ATOM    647  CD1 LEU A  90       1.514  56.436  31.972  1.00 43.38      A
ATOM    648  CD2 LEU A  90       1.932  57.016  34.341  1.00 43.38      A
ATOM    649  C   LEU A  90       4.990  54.028  34.683  1.00100.03      A
ATOM    650  O   LEU A  90       5.794  53.853  35.600  1.00100.03      A
ATOM    651  N   ASP A  91       4.627  53.064  33.845  1.00 82.00      A
ATOM    652  CA  ASP A  91       5.131  51.692  33.935  1.00 82.00      A
ATOM    653  CB  ASP A  91       5.334  51.115  32.531  1.00100.07      A
ATOM    654  CG  ASP A  91       6.270  51.954  31.685  1.00100.07      A
ATOM    655  OD1 ASP A  91       7.485  51.991  31.985  1.00100.07      A
ATOM    656  OD2 ASP A  91       5.783  52.582  30.717  1.00100.07      A
ATOM    657  C   ASP A  91       6.391  51.442  34.752  1.00 82.00      A
ATOM    658  O   ASP A  91       7.498  51.752  34.318  1.00 82.00      A
ATOM    659  N   PRO A  92       6.230  50.878  35.958  1.00 75.04      A
ATOM    660  CD  PRO A  92       4.953  50.554  36.616  1.00100.07      A
ATOM    661  CA  PRO A  92       7.356  50.571  36.837  1.00 75.04      A
ATOM    662  CB  PRO A  92       6.721  49.688  37.893  1.00100.07      A
ATOM    663  CG  PRO A  92       5.374  50.328  38.051  1.00100.07      A
ATOM    664  C   PRO A  92       8.396  49.840  36.007  1.00 75.04      A
ATOM    665  O   PRO A  92       8.216  48.664  35.655  1.00 75.04      A
ATOM    666  N   ARG A  93       9.457  50.578  35.680  1.00100.07      A
ATOM    667  CA  ARG A  93      10.584  50.115  34.869  1.00100.07      A
ATOM    668  CB  ARG A  93      10.444  48.626  34.537  1.00100.07      A
ATOM    669  CG  ARG A  93      11.763  47.913  34.422  1.00100.07      A
ATOM    670  CD  ARG A  93      12.626  48.210  35.641  1.00100.07      A
ATOM    671  NE  ARG A  93      13.974  47.675  35.493  1.00100.07      A
ATOM    672  CZ  ARG A  93      15.043  48.171  36.105  1.00100.07      A
ATOM    673  NH1 ARG A  93      14.919  49.220  36.909  1.00100.07      A
ATOM    674  NH2 ARG A  93      16.235  47.624  35.903  1.00100.07      A
ATOM    675  C   ARG A  93      10.591  50.940  33.581  1.00100.07      A
ATOM    676  O   ARG A  93       9.553  51.079  32.934  1.00100.07      A
ATOM    677  N   TRP A  94      11.740  51.503  33.210  1.00 75.71      A
ATOM    678  CA  TRP A  94      11.794  52.301  31.987  1.00 75.71      A
ATOM    679  CB  TRP A  94      10.774  53.442  32.089  1.00 99.15      A
ATOM    680  CG  TRP A  94       9.927  53.683  30.853  1.00 99.15      A
ATOM    681  CD2 TRP A  94       9.912  52.919  29.642  1.00 99.15      A
ATOM    682  CE2 TRP A  94       8.990  53.540  28.769  1.00 99.15      A
ATOM    683  CE3 TRP A  94      10.585  51.772  29.207  1.00 99.15      A
ATOM    684  CD1 TRP A  94       9.035  54.699  30.666  1.00 99.15      A
ATOM    685  NE1 TRP A  94       8.472  54.624  29.421  1.00 99.15      A
ATOM    686  CZ2 TRP A  94       8.726  53.055  27.485  1.00 99.15      A
ATOM    687  CZ3 TRP A  94      10.323  51.289  27.926  1.00 99.15      A
ATOM    688  CH2 TRP A  94       9.399  51.932  27.081  1.00 99.15      A
ATOM    689  C   TRP A  94      13.181  52.860  31.622  1.00 75.71      A
ATOM    690  O   TRP A  94      14.204  52.300  32.021  1.00 75.71      A
ATOM    691  N   ARG A  95      13.168  53.951  30.846  1.00 54.02      A
ATOM    692  CA  ARG A  95      14.330  54.700  30.336  1.00 54.02      A
ATOM    693  CB  ARG A  95      15.670  54.103  30.811  1.00100.06      A
ATOM    694  CG  ARG A  95      15.943  54.246  32.325  1.00100.06      A
ATOM    695  CD  ARG A  95      17.394  53.909  32.698  1.00100.06      A
ATOM    696  NE  ARG A  95      17.546  53.545  34.111  1.00100.06      A
ATOM    697  CZ  ARG A  95      18.714  53.439  34.748  1.00100.06      A
ATOM    698  NH1 ARG A  95      19.855  53.674  34.114  1.00100.06      A
ATOM    699  NH2 ARG A  95      18.745  53.077  36.025  1.00100.06      A
ATOM    700  C   ARG A  95      14.278  54.722  28.811  1.00 54.02      A
ATOM    701  O   ARG A  95      15.299  54.555  28.157  1.00 54.02      A
ATOM    702  N   THR A  96      13.080  54.976  28.270  1.00 42.25      A
ATOM    703  CA  THR A  96      12.785  54.978  26.817  1.00 42.25      A
ATOM    704  CB  THR A  96      11.251  54.979  26.574  1.00 64.26      A
ATOM    705  OG1 THR A  96      10.987  54.595  25.221  1.00 64.26      A
ATOM    706  CG2 THR A  96      10.659  56.357  26.820  1.00 64.26      A
ATOM    707  C   THR A  96      13.397  56.022  25.870  1.00 42.25      A
ATOM    708  O   THR A  96      14.484  56.530  26.109  1.00 42.25      A
ATOM    709  N   THR A  97      12.691  56.311  24.780  1.00 37.72      A
ATOM    710  CA  THR A  97      13.146  57.277  23.781  1.00 37.72      A
ATOM    711  CB  THR A  97      13.999  56.625  22.731  1.00 16.48      A
ATOM    712  OG1 THR A  97      15.101  55.984  23.369  1.00 16.48      A
ATOM    713  CG2 THR A  97      14.492  57.667  21.735  1.00 16.48      A
ATOM    714  C   THR A  97      12.004  57.939  23.029  1.00 37.72      A
ATOM    715  O   THR A  97      10.949  57.347  22.842  1.00 37.72      A
ATOM    716  N   LEU A  98      12.218  59.158  22.562  1.00 50.75      A
ATOM    717  CA  LEU A  98      11.151  59.825  21.859  1.00 50.75      A
ATOM    718  CB  LEU A  98      10.672  61.041  22.648  1.00 14.35      A
```

```
ATOM    719  CG   LEU A  98      10.225  60.667  24.070  1.00 14.35       A
ATOM    720  CD1  LEU A  98       9.781  61.881  24.863  1.00 14.35       A
ATOM    721  CD2  LEU A  98       9.095  59.657  23.960  1.00 14.35       A
ATOM    722  C    LEU A  98      11.518  60.220  20.451  1.00 50.75       A
ATOM    723  O    LEU A  98      12.700  60.311  20.095  1.00 50.75       A
ATOM    724  N    ILE A  99      10.475  60.437  19.654  1.00 47.11       A
ATOM    725  CA   ILE A  99      10.587  60.809  18.262  1.00 47.11       A
ATOM    726  CB   ILE A  99       9.811  59.852  17.384  1.00 41.20       A
ATOM    727  CG2  ILE A  99       9.582  60.479  16.034  1.00 41.20       A
ATOM    728  CG1  ILE A  99      10.541  58.514  17.290  1.00 41.20       A
ATOM    729  CD   ILE A  99      11.838  58.567  16.494  1.00 41.20       A
ATOM    730  C    ILE A  99       9.962  62.158  18.094  1.00 47.11       A
ATOM    731  O    ILE A  99       9.129  62.560  18.888  1.00 47.11       A
ATOM    732  N    LEU A 100      10.362  62.855  17.047  1.00 24.91       A
ATOM    733  CA   LEU A 100       9.826  64.172  16.751  1.00 24.91       A
ATOM    734  CB   LEU A 100      10.314  65.222  17.746  1.00 89.32       A
ATOM    735  CG   LEU A 100      10.260  66.662  17.209  1.00 89.32       A
ATOM    736  CD1  LEU A 100       8.948  66.937  16.494  1.00 89.32       A
ATOM    737  CD2  LEU A 100      10.458  67.625  18.347  1.00 89.32       A
ATOM    738  C    LEU A 100      10.312  64.540  15.389  1.00 24.91       A
ATOM    739  O    LEU A 100      11.282  65.277  15.254  1.00 24.91       A
ATOM    740  N    ARG A 101       9.637  64.010  14.380  1.00 83.85       A
ATOM    741  CA   ARG A 101      10.007  64.266  13.002  1.00 83.85       A
ATOM    742  CB   ARG A 101       9.584  63.072  12.126  1.00100.07       A
ATOM    743  CG   ARG A 101      10.640  62.603  11.118  1.00100.07       A
ATOM    744  CD   ARG A 101      10.512  61.104  10.804  1.00100.07       A
ATOM    745  NE   ARG A 101      11.748  60.552  10.237  1.00100.07       A
ATOM    746  CZ   ARG A 101      11.980  59.255  10.026  1.00100.07       A
ATOM    747  NH1  ARG A 101      11.055  58.354  10.334  1.00100.07       A
ATOM    748  NH2  ARG A 101      13.143  58.854   9.515  1.00100.07       A
ATOM    749  C    ARG A 101       9.348  65.555  12.520  1.00 83.85       A
ATOM    750  O    ARG A 101       9.977  66.373  11.845  1.00 83.85       A
ATOM    751  N    ALA A 102       8.088  65.733  12.908  1.00 35.68       A
ATOM    752  CA   ALA A 102       7.281  66.885  12.516  1.00 35.68       A
ATOM    753  CB   ALA A 102       6.218  67.171  13.578  1.00 52.49       A
ATOM    754  C    ALA A 102       8.099  68.130  12.234  1.00 35.68       A
ATOM    755  O    ALA A 102       8.750  68.679  13.124  1.00 35.68       A
ATOM    756  N    ALA A 103       8.047  68.566  10.980  1.00 42.28       A
ATOM    757  CA   ALA A 103       8.787  69.731  10.539  1.00 42.28       A
ATOM    758  CB   ALA A 103       9.994  69.286   9.739  1.00100.07       A
ATOM    759  C    ALA A 103       7.947  70.713   9.735  1.00 42.28       A
ATOM    760  O    ALA A 103       8.442  71.411   8.847  1.00 42.28       A
ATOM    761  N    GLY A 104       6.662  70.769  10.046  1.00100.07       A
ATOM    762  CA   GLY A 104       5.816  71.702   9.338  1.00100.07       A
ATOM    763  C    GLY A 104       6.221  73.106   9.744  1.00100.07       A
ATOM    764  O    GLY A 104       6.073  73.475  10.913  1.00100.07       A
ATOM    765  N    PRO A 105       6.764  73.904   8.811  1.00 83.24       A
ATOM    766  CD   PRO A 105       7.061  73.545   7.412  1.00 87.70       A
ATOM    767  CA   PRO A 105       7.183  75.276   9.088  1.00 83.24       A
ATOM    768  CB   PRO A 105       7.210  75.887   7.701  1.00 87.70       A
ATOM    769  CG   PRO A 105       7.817  74.760   6.914  1.00 87.70       A
ATOM    770  C    PRO A 105       6.241  76.006  10.048  1.00 83.24       A
ATOM    771  O    PRO A 105       5.326  76.710   9.617  1.00 83.24       A
ATOM    772  N    LYS A 106       6.479  75.815  11.346  1.00 72.93       A
ATOM    773  CA   LYS A 106       5.689  76.430  12.411  1.00 72.93       A
ATOM    774  CB   LYS A 106       4.307  75.787  12.495  1.00 99.49       A
ATOM    775  CG   LYS A 106       4.326  74.377  13.040  1.00 99.49       A
ATOM    776  CD   LYS A 106       2.920  73.858  13.249  1.00 99.49       A
ATOM    777  CE   LYS A 106       2.936  72.521  13.974  1.00 99.49       A
ATOM    778  NZ   LYS A 106       1.564  72.035  14.306  1.00 99.49   -   A
ATOM    779  C    LYS A 106       6.410  76.237  13.746  1.00 72.93       A
ATOM    780  O    LYS A 106       7.586  75.869  13.776  1.00 72.93       A
ATOM    781  N    GLU A 107       5.700  76.477  14.845  1.00 85.68       A
ATOM    782  CA   GLU A 107       6.272  76.332  16.185  1.00 85.68       A
ATOM    783  CB   GLU A 107       5.506  77.187  17.190  1.00 99.92       A
ATOM    784  CG   GLU A 107       5.735  78.668  17.095  1.00 99.92       A
ATOM    785  CD   GLU A 107       5.712  79.314  18.467  1.00 99.92       A
ATOM    786  OE1  GLU A 107       4.768  79.039  19.242  1.00 99.92       A
ATOM    787  OE2  GLU A 107       6.640  80.092  18.772  1.00 99.92       A
ATOM    788  C    GLU A 107       6.265  74.896  16.710  1.00 85.68       A
ATOM    789  O    GLU A 107       5.197  74.339  16.978  1.00 85.68       A
ATOM    790  N    VAL A 108       7.443  74.300  16.875  1.00 77.04       A
ATOM    791  CA   VAL A 108       7.505  72.942  17.405  1.00 77.04       A
ATOM    792  CB   VAL A 108       8.715  72.136  16.849  1.00 16.82       A
ATOM    793  CG1  VAL A 108       8.635  70.668  17.318  1.00 16.82       A
ATOM    794  CG2  VAL A 108       8.742  72.207  15.321  1.00 16.82       A
ATOM    795  C    VAL A 108       7.624  73.011  18.926  1.00 77.04       A
ATOM    796  O    VAL A 108       8.637  73.456  19.464  1.00 77.04       A
ATOM    797  N    ARG A 109       6.567  72.584  19.606  1.00 23.54       A
ATOM    798  CA   ARG A 109       6.496  72.558  21.066  1.00 23.54       A
ATOM    799  CB   ARG A 109       5.194  73.211  21.505  1.00100.07       A
ATOM    800  CG   ARG A 109       4.015  72.742  20.673  1.00100.07       A
ATOM    801  CD   ARG A 109       2.715  73.404  21.074  1.00100.07       A
ATOM    802  NE   ARG A 109       1.634  73.012  20.178  1.00100.07       A
```

```
ATOM    803  CZ   ARG A 109      0.382  73.423  20.306  1.00100.07           A
ATOM    804  NH1  ARG A 109      0.053  74.238  21.298  1.00100.07           A
ATOM    805  NH2  ARG A 109     -0.536  73.027  19.438  1.00100.07           A
ATOM    806  C    ARG A 109      6.520  71.091  21.492  1.00 23.54           A
ATOM    807  O    ARG A 109      6.398  70.210  20.648  1.00 23.54           A
ATOM    808  N    ALA A 110      6.655  70.823  22.786  1.00 50.26           A
ATOM    809  CA   ALA A 110      6.725  69.446  23.295  1.00 50.26           A
ATOM    810  CB   ALA A 110      6.742  69.455  24.823  1.00 70.58           A
ATOM    811  C    ALA A 110      5.652  68.478  22.808  1.00 50.26           A
ATOM    812  O    ALA A 110      5.957  67.321  22.510  1.00 50.26           A
ATOM    813  N    VAL A 111      4.405  68.936  22.748  1.00 98.69           A
ATOM    814  CA   VAL A 111      3.293  68.098  22.300  1.00 98.69           A
ATOM    815  CB   VAL A 111      2.064  68.967  21.939  1.00100.07           A
ATOM    816  CG1  VAL A 111      0.896  68.091  21.485  1.00100.07           A
ATOM    817  CG2  VAL A 111      1.663  69.801  23.140  1.00100.07           A
ATOM    818  C    VAL A 111      3.692  67.281  21.082  1.00 98.69           A
ATOM    819  O    VAL A 111      3.751  66.051  21.139  1.00 98.69           A
ATOM    820  N    ASP A 112      3.974  67.989  19.991  1.00 65.07           A
ATOM    821  CA   ASP A 112      4.371  67.396  18.720  1.00 65.07           A
ATOM    822  CB   ASP A 112      5.018  68.476  17.865  1.00 99.77           A
ATOM    823  CG   ASP A 112      4.079  69.630  17.595  1.00 99.77           A
ATOM    824  OD1  ASP A 112      3.135  69.448  16.801  1.00 99.77           A
ATOM    825  OD2  ASP A 112      4.271  70.713  18.185  1.00 99.77           A
ATOM    826  C    ASP A 112      5.308  66.207  18.869  1.00 65.07           A
ATOM    827  O    ASP A 112      5.536  65.458  17.926  1.00 65.07           A
ATOM    828  N    PHE A 113      5.860  66.035  20.058  1.00 61.73           A
ATOM    829  CA   PHE A 113      6.746  64.921  20.301  1.00 61.73           A
ATOM    830  CB   PHE A 113      7.319  65.006  21.705  1.00 56.73           A
ATOM    831  CG   PHE A 113      8.798  65.124  21.730  1.00 56.73           A
ATOM    832  CD1  PHE A 113      9.407  66.335  21.469  1.00 56.73           A
ATOM    833  CD2  PHE A 113      9.588  64.012  21.984  1.00 56.73           A
ATOM    834  CE1  PHE A 113     10.789  66.442  21.461  1.00 56.73           A
ATOM    835  CE2  PHE A 113     10.962  64.108  21.977  1.00 56.73           A
ATOM    836  CZ   PHE A 113     11.567  65.327  21.715  1.00 56.73           A
ATOM    837  C    PHE A 113      5.964  63.630  20.159  1.00 61.73           A
ATOM    838  O    PHE A 113      5.220  63.259  21.071  1.00 61.73           A
ATOM    839  N    THR A 114      6.143  62.953  19.023  1.00 51.46           A
ATOM    840  CA   THR A 114      5.463  61.689  18.735  1.00 51.46           A
ATOM    841  CB   THR A 114      6.451  60.574  18.353  1.00 52.59           A
ATOM    842  OG1  THR A 114      5.754  59.322  18.281  1.00 52.59           A
ATOM    843  CG2  THR A 114      7.530  60.453  19.391  1.00 52.59           A
ATOM    844  C    THR A 114      4.627  61.158  19.886  1.00 51.46           A
ATOM    845  O    THR A 114      5.152  60.816  20.957  1.00 51.46           A
ATOM    846  N    PRO A 115      3.302  61.095  19.688  1.00 41.98           A
ATOM    847  CD   PRO A 115      2.489  61.486  18.519  1.00 51.61           A
ATOM    848  CA   PRO A 115      2.468  60.581  20.775  1.00 41.98           A
ATOM    849  CB   PRO A 115      1.097  60.452  20.117  1.00 51.61           A
ATOM    850  CG   PRO A 115      1.103  61.597  19.113  1.00 51.61           A
ATOM    851  C    PRO A 115      3.082  59.234  21.150  1.00 41.98           A
ATOM    852  O    PRO A 115      3.723  58.579  20.320  1.00 41.98           A
ATOM    853  N    SER A 116      2.920  58.833  22.399  1.00 71.44           A
ATOM    854  CA   SER A 116      3.477  57.568  22.825  1.00 71.44           A
ATOM    855  CB   SER A 116      4.994  57.593  22.699  1.00 81.81           A
ATOM    856  OG   SER A 116      5.547  56.438  23.297  1.00 81.81           A
ATOM    857  C    SER A 116      3.101  57.329  24.263  1.00 71.44           A
ATOM    858  O    SER A 116      3.800  57.796  25.167  1.00 71.44           A
ATOM    859  N    ALA A 117      1.999  56.605  24.469  1.00100.07           A
ATOM    860  CA   ALA A 117      1.496  56.304  25.813  1.00100.07           A
ATOM    861  CB   ALA A 117      0.308  55.325  25.741  1.00 89.40           A
ATOM    862  C    ALA A 117      2.600  55.731  26.696  1.00100.07           A
ATOM    863  O    ALA A 117      3.788  55.878  26.391  1.00100.07           A
ATOM    864  N    ASP A 118      2.211  55.071  27.785  1.00 68.67           A
ATOM    865  CA   ASP A 118      3.183  54.496  28.708  1.00 68.67           A
ATOM    866  CB   ASP A 118      3.846  53.268  28.082  1.00 77.30           A
ATOM    867  CG   ASP A 118      4.291  53.511  26.643  1.00 77.30           A
ATOM    868  OD1  ASP A 118      3.434  53.509  25.733  1.00 77.30           A
ATOM    869  OD2  ASP A 118      5.496  53.729  26.415  1.00 77.30           A
ATOM    870  C    ASP A 118      4.243  55.545  29.034  1.00 68.67           A
ATOM    871  O    ASP A 118      5.300  55.229  29.582  1.00 68.67           A
ATOM    872  N    VAL A 119      3.928  56.792  28.697  1.00 84.27           A
ATOM    873  CA   VAL A 119      4.804  57.948  28.899  1.00 84.27           A
ATOM    874  CB   VAL A 119      5.951  57.944  27.867  1.00 70.32           A
ATOM    875  CG1  VAL A 119      6.553  59.328  27.744  1.00 70.32           A
ATOM    876  CG2  VAL A 119      7.019  56.947  28.282  1.00 70.32           A
ATOM    877  C    VAL A 119      4.008  59.247  28.718  1.00 84.27           A
ATOM    878  O    VAL A 119      3.488  59.510  27.635  1.00 84.27           A
ATOM    879  N    GLU A 120      3.919  60.055  29.774  1.00 94.10           A
ATOM    880  CA   GLU A 120      3.197  61.329  29.717  1.00 94.10           A
ATOM    881  CB   GLU A 120      2.408  61.574  31.007  1.00100.07           A
ATOM    882  CG   GLU A 120      1.097  60.818  31.143  1.00100.07           A
ATOM    883  CD   GLU A 120      0.374  61.162  32.439  1.00100.07           A
ATOM    884  OE1  GLU A 120      0.063  62.356  32.654  1.00100.07           A
ATOM    885  OE2  GLU A 120      0.123  60.238  33.243  1.00100.07           A
ATOM    886  C    GLU A 120      4.138  62.512  29.518  1.00 94.10           A
```

```
ATOM    887  O    GLU A 120      5.307  62.459  29.901  1.00  94.10      A
ATOM    888  N    ILE A 121      3.618  63.586  28.932  1.00  65.61      A
ATOM    889  CA   ILE A 121      4.414  64.785  28.706  1.00  65.61      A
ATOM    890  CB   ILE A 121      4.379  65.212  27.231  1.00  99.99      A
ATOM    891  CG2  ILE A 121      5.350  66.360  26.993  1.00  99.99      A
ATOM    892  CG1  ILE A 121      4.740  64.019  26.349  1.00  99.99      A
ATOM    893  CD   ILE A 121      5.999  63.297  26.775  1.00  99.99      A
ATOM    894  C    ILE A 121      3.890  65.924  29.573  1.00  65.61      A
ATOM    895  O    ILE A 121      3.383  66.932  29.074  1.00  65.61      A
ATOM    896  N    MET A 122      4.022  65.738  30.881  1.00  73.05      A
ATOM    897  CA   MET A 122      3.583  66.696  31.883  1.00  73.05      A
ATOM    898  CB   MET A 122      4.516  66.614  33.095  1.00100.07      A
ATOM    899  CG   MET A 122      3.825  66.738  34.449  1.00100.07      A
ATOM    900  SD   MET A 122      3.484  65.141  35.256  1.00100.07      A
ATOM    901  CE   MET A 122      2.173  64.515  34.188  1.00100.07      A
ATOM    902  C    MET A 122      3.520  68.138  31.385  1.00  73.05      A
ATOM    903  O    MET A 122      2.609  68.887  31.745  1.00  73.05      A
ATOM    904  N    ASN A 123      4.484  68.531  30.558  1.00  98.98      A
ATOM    905  CA   ASN A 123      4.509  69.896  30.054  1.00  98.98      A
ATOM    906  CB   ASN A 123      5.772  70.619  30.526  1.00  99.41      A
ATOM    907  CG   ASN A 123      7.021  70.152  29.800  1.00  99.41      A
ATOM    908  OD1  ASN A 123      7.420  68.994  29.902  1.00  99.41      A
ATOM    909  ND2  ASN A 123      7.639  71.056  29.055  1.00  99.41      A
ATOM    910  C    ASN A 123      4.437  69.985  28.543  1.00  98.98      A
ATOM    911  O    ASN A 123      5.416  69.724  27.849  1.00  98.98      A
ATOM    912  N    PRO A 124      3.265  70.337  28.005  1.00  50.62      A
ATOM    913  CD   PRO A 124      2.027  70.802  28.648  1.00100.07      A
ATOM    914  CA   PRO A 124      3.169  70.452  26.551  1.00  50.62      A
ATOM    915  CB   PRO A 124      1.679  70.610  26.327  1.00100.07      A
ATOM    916  CG   PRO A 124      1.289  71.460  27.488  1.00100.07      A
ATOM    917  C    PRO A 124      3.921  71.758  26.316  1.00  50.62      A
ATOM    918  O    PRO A 124      4.892  72.051  27.024  1.00  50.62      A
ATOM    919  N    ASP A 125      3.473  72.561  25.362  1.00100.07      A
ATOM    920  CA   ASP A 125      4.131  73.839  25.117  1.00100.07      A
ATOM    921  CB   ASP A 125      3.710  74.842  26.199  1.00  71.33      A
ATOM    922  CG   ASP A 125      2.506  74.361  27.017  1.00  71.33      A
ATOM    923  OD1  ASP A 125      1.415  74.196  26.440  1.00  71.33      A
ATOM    924  OD2  ASP A 125      2.648  74.143  28.241  1.00  71.33      A
ATOM    925  C    ASP A 125      5.666  73.702  25.089  1.00100.07      A
ATOM    926  O    ASP A 125      6.229  73.191  24.122  1.00100.07      A
ATOM    927  N    LEU A 126      6.333  74.162  26.146  1.00  27.66      A
ATOM    928  CA   LEU A 126      7.789  74.085  26.264  1.00  27.66      A
ATOM    929  CB   LEU A 126      8.174  72.657  26.651  1.00  48.42      A
ATOM    930  CG   LEU A 126      9.651  72.263  26.779  1.00  48.42      A
ATOM    931  CD1  LEU A 126     10.257  72.842  28.048  1.00  48.42      A
ATOM    932  CD2  LEU A 126      9.759  70.747  26.804  1.00  48.42      A
ATOM    933  C    LEU A 126      8.538  74.486  24.989  1.00  27.66      A
ATOM    934  O    LEU A 126      9.587  73.915  24.698  1.00  27.66      A
ATOM    935  N    HIS A 127      8.018  75.469  24.249  1.00  55.30      A
ATOM    936  CA   HIS A 127      8.623  75.917  22.982  1.00  55.30      A
ATOM    937  CB   HIS A 127      8.847  77.433  22.963  1.00  78.31      A
ATOM    938  CG   HIS A 127      9.335  77.957  21.640  1.00  78.31      A
ATOM    939  CD2  HIS A 127      8.997  79.067  20.940  1.00  78.31      A
ATOM    940  ND1  HIS A 127     10.305  77.318  20.894  1.00  78.31      A
ATOM    941  CE1  HIS A 127     10.541  78.011  19.794  1.00  78.31      A
ATOM    942  NE2  HIS A 127      9.761  79.077  19.797  1.00  78.31      A
ATOM    943  C    HIS A 127      9.945  75.246  22.645  1.00  55.30      A
ATOM    944  O    HIS A 127     11.003  75.862  22.756  1.00  55.30      A
ATOM    945  N    ILE A 128      9.900  73.992  22.224  1.00  32.89      A
ATOM    946  CA   ILE A 128     11.143  73.328  21.912  1.00  32.89      A
ATOM    947  CB   ILE A 128     10.933  71.841  21.579  1.00  28.75      A
ATOM    948  CG2  ILE A 128     11.983  71.355  20.562  1.00  28.75      A
ATOM    949  CG1  ILE A 128     10.986  71.030  22.871  1.00  28.75      A
ATOM    950  CD   ILE A 128     11.375  69.573  22.673  1.00  28.75      A
ATOM    951  C    ILE A 128     11.870  73.994  20.762  1.00  32.89      A
ATÓM    952  O    ILE A 128     13.098  74.063  20.783  1.00  32.89      A
ATOM    953  N    ALA A 129     11.150  74.484  19.755  1.00  35.51      A
ATOM    954  CA   ALA A 129     11.844  75.135  18.640  1.00  35.51      A
ATOM    955  CB   ALA A 129     12.968  74.222  18.105  1.00  64.61      A
ATOM    956  C    ALA A 129     11.002  75.620  17.468  1.00  35.51      A
ATOM    957  O    ALA A 129     10.142  74.912  16.941  1.00  35.51      A
ATOM    958  N    THR A 130     11.284  76.847  17.062  1.00  56.00      A
ATOM    959  CA   THR A 130     10.614  77.454  15.938  1.00  56.00      A
ATOM    960  CB   THR A 130     10.783  78.977  15.963  1.00  97.43      A
ATOM    961  OG1  THR A 130     10.089  79.515  17.095  1.00  97.43      A
ATOM    962  CG2  THR A 130     10.263  79.600  14.668  1.00  97.43      A
ATOM    963  C    THR A 130     11.324  76.926  14.716  1.00  56.00      A
ATOM    964  O    THR A 130     12.433  76.425  14.819  1.00  56.00      A
ATOM    965  N    LEU A 131     10.678  77.017  13.566  1.00  96.96      A
ATOM    966  CA   LEU A 131     11.262  76.591  12.303  1.00  96.96      A
ATOM    967  CB   LEU A 131     11.596  75.069  12.278  1.00  14.70      A
ATOM    968  CG   LEU A 131     10.673  73.901  12.679  1.00  14.70      A
ATOM    969  CD1  LEU A 131      9.538  73.750  11.686  1.00  14.70      A
ATOM    970  CD2  LEU A 131     11.487  72.612  12.725  1.00  14.70      A
```

-12-

```
ATOM    971  C    LEU A 131      10.225  76.982  11.276  1.00 96.96      A
ATOM    972  O    LEU A 131       9.037  77.057  11.586  1.00 96.96      A
ATOM    973  N    GLU A 132      10.676  77.294  10.071  1.00 33.61      A
ATOM    974  CA   GLU A 132       9.758  77.690   9.030  1.00 33.61      A
ATOM    975  CB   GLU A 132       9.275  79.126   9.262  1.00100.07      A
ATOM    976  CG   GLU A 132      10.357  80.190   9.227  1.00100.07      A
ATOM    977  CD   GLU A 132       9.840  81.549   9.680  1.00100.07      A
ATOM    978  OE1  GLU A 132       9.431  81.657  10.860  1.00100.07      A
ATOM    979  OE2  GLU A 132       9.838  82.502   8.863  1.00100.07      A
ATOM    980  C    GLU A 132      10.375  77.546   7.658  1.00 33.61      A
ATOM    981  O    GLU A 132      11.603  77.496   7.520  1.00 33.61      A
ATOM    982  N    GLU A 133       9.488  77.448   6.667  1.00 83.31      A
ATOM    983  CA   GLU A 133       9.816  77.309   5.253  1.00 83.31      A
ATOM    984  CB   GLU A 133      10.514  78.582   4.768  1.00100.07      A
ATOM    985  CG   GLU A 133      10.593  78.703   3.256  1.00100.07      A
ATOM    986  CD   GLU A 133      11.146  80.045   2.793  1.00100.07      A
ATOM    987  OE1  GLU A 133      10.642  81.092   3.266  1.00100.07      A
ATOM    988  OE2  GLU A 133      12.072  80.049   1.946  1.00100.07      A
ATOM    989  C    GLU A 133      10.652  76.073   4.879  1.00 83.31      A
ATOM    990  O    GLU A 133      10.635  75.630   3.728  1.00 83.31      A
ATOM    991  N    GLY A 134      11.370  75.504   5.841  1.00 99.81      A
ATOM    992  CA   GLY A 134      12.190  74.345   5.535  1.00 99.81      A
ATOM    993  C    GLY A 134      12.147  73.242   6.571  1.00 99.81      A
ATOM    994  O    GLY A 134      13.135  72.953   7.251  1.00 99.81      A
ATOM    995  N    GLY A 135      10.986  72.615   6.678  1.00100.07      A
ATOM    996  CA   GLY A 135      10.808  71.535   7.625  1.00100.07      A
ATOM    997  C    GLY A 135      11.883  70.469   7.656  1.00100.07      A
ATOM    998  O    GLY A 135      11.861  69.498   6.894  1.00100.07      A
ATOM    999  N    LYS A 136      12.828  70.642   8.561  1.00 72.43      A
ATOM   1000  CA   LYS A 136      13.899  69.685   8.702  1.00 72.43      A
ATOM   1001  CB   LYS A 136      15.189  70.282   8.133  1.00100.07      A
ATOM   1002  CG   LYS A 136      16.330  69.291   7.911  1.00100.07      A
ATOM   1003  CD   LYS A 136      16.063  68.365   6.724  1.00100.07      A
ATOM   1004  CE   LYS A 136      17.254  67.452   6.455  1.00100.07      A
ATOM   1005  NZ   LYS A 136      16.977  66.466   5.374  1.00100.07      A
ATOM   1006  C    LYS A 136      14.006  69.535  10.199  1.00 72.43      A
ATOM   1007  O    LYS A 136      14.514  70.438  10.852  1.00 72.43      A
ATOM   1008  N    LEU A 137      13.513  68.441  10.774  1.00 56.42      A
ATOM   1009  CA   LEU A 137      13.650  68.333  12.220  1.00 56.42      A
ATOM   1010  CB   LEU A 137      12.468  69.017  12.903  1.00 27.01      A
ATOM   1011  CG   LEU A 137      12.654  69.167  14.421  1.00 27.01      A
ATOM   1012  CD1  LEU A 137      14.017  69.743  14.728  1.00 27.01      A
ATOM   1013  CD2  LEU A 137      11.548  70.047  14.998  1.00 27.01      A
ATOM   1014  C    LEU A 137      13.904  66.971  12.866  1.00 56.42      A
ATOM   1015  O    LEU A 137      14.781  66.865  13.726  1.00 56.42      A
ATOM   1016  N    TYR A 138      13.160  65.942  12.463  1.00 42.82      A
ATOM   1017  CA   TYR A 138      13.313  64.596  13.041  1.00 42.82      A
ATOM   1018  CB   TYR A 138      13.670  63.566  11.961  1.00 53.06      A
ATOM   1019  CG   TYR A 138      13.835  62.165  12.522  1.00 53.06      A
ATOM   1020  CD1  TYR A 138      12.800  61.560  13.238  1.00 53.06      A
ATOM   1021  CE1  TYR A 138      12.951  60.307  13.817  1.00 53.06      A
ATOM   1022  CD2  TYR A 138      15.034  61.467  12.390  1.00 53.06      A
ATOM   1023  CE2  TYR A 138      15.195  60.203  12.968  1.00 53.06      A
ATOM   1024  CZ   TYR A 138      14.145  59.639  13.687  1.00 53.06      A
ATOM   1025  OH   TYR A 138      14.297  58.439  14.329  1.00 53.06      A
ATOM   1026  C    TYR A 138      14.350  64.479  14.164  1.00 42.82      A
ATOM   1027  O    TYR A 138      15.546  64.369  13.897  1.00 42.82      A
ATOM   1028  N    MET A 139      13.881  64.498  15.411  1.00 77.85      A
ATOM   1029  CA   MET A 139      14.761  64.385  16.572  1.00 77.85      A
ATOM   1030  CB   MET A 139      14.628  65.614  17.464  1.00100.07      A
ATOM   1031  CG   MET A 139      14.947  66.909  16.760  1.00100.07      A
ATOM   1032  SD   MET A 139      15.042  68.272  17.916  1.00100.07      A
ATOM   1033  CE   MET A 139      13.373  68.931  17.827  1.00100.07      A
ATOM   1034  C    MET A 139      14.455  63.137  17.395  1.00 77.85      A
ATOM   1035  O    MET A 139      13.321  62.915  17.812  1.00 77.85      A
ATOM   1036  N    GLU A 140      15.477  62.327  17.631  1.00 29.15      A
ATOM   1037  CA   GLU A 140      15.324  61.100  18.387  1.00 29.15      A
ATOM   1038  CB   GLU A 140      15.984  59.966  17.604  1.00 74.04      A
ATOM   1039  CG   GLU A 140      15.658  58.564  18.069  1.00 74.04      A
ATOM   1040  CD   GLU A 140      16.472  57.505  17.331  1.00 74.04      A
ATOM   1041  OE1  GLU A 140      17.696  57.415  17.574  1.00 74.04      A
ATOM   1042  OE2  GLU A 140      15.892  56.766  16.504  1.00 74.04      A
ATOM   1043  C    GLU A 140      16.079  61.368  19.685  1.00 29.15      A
ATOM   1044  O    GLU A 140      17.310  61.253  19.707  1.00 29.15      A
ATOM   1045  N    VAL A 141      15.354  61.701  20.765  1.00  7.41      A
ATOM   1046  CA   VAL A 141      15.979  62.060  22.059  1.00  7.41      A
ATOM   1047  CB   VAL A 141      15.594  63.490  22.436  1.00 73.37      A
ATOM   1048  CG1  VAL A 141      14.110  63.667  22.270  1.00 73.37      A
ATOM   1049  CG2  VAL A 141      15.979  63.775  23.874  1.00 73.37      A
ATOM   1050  C    VAL A 141      15.735  61.219  23.301  1.00  7.41      A
ATOM   1051  O    VAL A 141      14.745  61.401  23.987  1.00  7.41      A
ATOM   1052  N    ARG A 142      16.675  60.353  23.631  1.00 25.95      A
ATOM   1053  CA   ARG A 142      16.529  59.479  24.789  1.00 25.95      A
ATOM   1054  CB   ARG A 142      17.838  58.742  25.040  1.00 45.39      A
```

-13-

```
ATOM   1055  CG  ARG A 142      17.775  57.735  26.157  1.00 45.39      A
ATOM   1056  CD  ARG A 142      19.112  57.119  26.362  1.00 45.39      A
ATOM   1057  NE  ARG A 142      19.050  56.066  27.351  1.00 45.39      A
ATOM   1058  CZ  ARG A 142      20.061  55.753  28.146  1.00 45.39      A
ATOM   1059  NH1 ARG A 142      21.197  56.430  28.051  1.00 45.39      A
ATOM   1060  NH2 ARG A 142      19.939  54.768  29.030  1.00 45.39      A
ATOM   1061  C   ARG A 142      16.148  60.222  26.057  1.00 25.95      A
ATOM   1062  O   ARG A 142      16.176  61.443  26.086  1.00 25.95      A
ATOM   1063  N   VAL A 143      15.795  59.455  27.092  1.00100.07      A
ATOM   1064  CA  VAL A 143      15.426  59.953  28.421  1.00100.07      A
ATOM   1065  CB  VAL A 143      13.951  60.446  28.483  1.00100.07      A
ATOM   1066  CG1 VAL A 143      13.727  61.579  27.495  1.00100.07      A
ATOM   1067  CG2 VAL A 143      13.007  59.312  28.189  1.00100.07      A
ATOM   1068  C   VAL A 143      15.616  58.797  29.416  1.00100.07      A
ATOM   1069  O   VAL A 143      15.115  57.694  29.202  1.00100.07      A
ATOM   1070  N   ASP A 144      16.332  59.053  30.506  1.00 51.55      A
ATOM   1071  CA  ASP A 144      16.632  58.012  31.495  1.00 51.55      A
ATOM   1072  CB  ASP A 144      18.153  57.902  31.686  1.00 39.57      A
ATOM   1073  CG  ASP A 144      18.863  57.204  30.532  1.00 39.57      A
ATOM   1074  OD1 ASP A 144      18.664  57.585  29.353  1.00 39.57      A
ATOM   1075  OD2 ASP A 144      19.645  56.272  30.822  1.00 39.57      A
ATOM   1076  C   ASP A 144      16.017  58.180  32.881  1.00 51.55      A
ATOM   1077  O   ASP A 144      15.578  59.262  33.263  1.00 51.55      A
ATOM   1078  N   ARG A 145      16.003  57.093  33.644  1.00 64.20      A
ATOM   1079  CA  ARG A 145      15.492  57.149  35.001  1.00 64.20      A
ATOM   1080  CB  ARG A 145      15.285  55.736  35.561  1.00 99.82      A
ATOM   1081  CG  ARG A 145      14.184  55.627  36.619  1.00 99.82      A
ATOM   1082  CD  ARG A 145      12.803  55.635  35.970  1.00 99.82      A
ATOM   1083  NE  ARG A 145      11.743  56.001  36.906  1.00 99.82      A
ATOM   1084  CZ  ARG A 145      10.455  56.077  36.585  1.00 99.82      A
ATOM   1085  NH1 ARG A 145      10.059  55.806  35.351  1.00 99.82      A
ATOM   1086  NH2 ARG A 145       9.565  56.442  37.494  1.00 99.82      A
ATOM   1087  C   ARG A 145      16.642  57.841  35.721  1.00 64.20      A
ATOM   1088  O   ARG A 145      17.790  57.689  35.318  1.00 64.20      A
ATOM   1089  N   GLY A 146      16.368  58.608  36.766  1.00 85.65      A
ATOM   1090  CA  GLY A 146      17.482  59.259  37.424  1.00 85.65      A
ATOM   1091  C   GLY A 146      17.289  59.789  38.825  1.00 85.65      A
ATOM   1092  O   GLY A 146      16.175  59.926  39.330  1.00 85.65      A
ATOM   1093  N   VAL A 147      18.421  60.099  39.443  1.00 74.35      A
ATOM   1094  CA  VAL A 147      18.476  60.624  40.792  1.00 74.35      A
ATOM   1095  CB  VAL A 147      18.627  59.499  41.796  1.00 36.54      A
ATOM   1096  CG1 VAL A 147      18.898  60.070  43.181  1.00 36.54      A
ATOM   1097  CG2 VAL A 147      17.383  58.628  41.771  1.00 36.54      A
ATOM   1098  C   VAL A 147      19.695  61.514  40.878  1.00 74.35      A
ATOM   1099  O   VAL A 147      20.760  61.174  40.357  1.00 74.35      A
ATOM   1100  N   GLY A 148      19.547  62.650  41.538  1.00 50.28      A
ATOM   1101  CA  GLY A 148      20.673  63.553  41.650  1.00 50.28      A
ATOM   1102  C   GLY A 148      20.896  64.253  40.322  1.00 50.28      A
ATOM   1103  O   GLY A 148      20.062  64.160  39.411  1.00 50.28      A
ATOM   1104  N   TYR A 149      22.031  64.941  40.212  1.00 65.06      A
ATOM   1105  CA  TYR A 149      22.396  65.694  39.015  1.00 65.06      A
ATOM   1106  CB  TYR A 149      22.614  67.157  39.419  1.00 46.08      A
ATOM   1107  CG  TYR A 149      23.368  68.042  38.448  1.00 46.08      A
ATOM   1108  CD1 TYR A 149      23.036  68.092  37.098  1.00 46.08      A
ATOM   1109  CE1 TYR A 149      23.700  68.964  36.226  1.00 46.08      A
ATOM   1110  CD2 TYR A 149      24.385  68.882  38.904  1.00 46.08      A
ATOM   1111  CE2 TYR A 149      25.052  69.750  38.043  1.00 46.08      A
ATOM   1112  CZ  TYR A 149      24.708  69.787  36.708  1.00 46.08      A
ATOM   1113  OH  TYR A 149      25.384  70.637  35.866  1.00 46.08      A
ATOM   1114  C   TYR A 149      23.645  65.122  38.380  1.00 65.06      A
ATOM   1115  O   TYR A 149      24.665  64.975  39.043  1.00 65.06      A
ATOM   1116  N   VAL A 150      23.557  64.778  37.100  1.00 45.82      A
ATOM   1117  CA  VAL A 150      24.702  64.230  36.381  1.00 45.82      A
ATOM   1118  CB  VAL A 150      24.612  62.709  36.233  1.00 23.65      A
ATOM   1119  CG1 VAL A 150      25.897  62.185  35.631  1.00 23.65      A
ATOM   1120  CG2 VAL A 150      24.388  62.075  37.588  1.00 23.65      A
ATOM   1121  C   VAL A 150      24.774  64.872  35.012  1.00 45.82      A
ATOM   1122  O   VAL A 150      23.782  64.947  34.298  1.00 45.82      A
ATOM   1123  N   PRO A 151      25.962  65.347  34.630  1.00 38.98      A
ATOM   1124  CD  PRO A 151      27.109  65.558  35.532  1.00 32.54      A
ATOM   1125  CA  PRO A 151      26.179  66.006  33.340  1.00 38.98      A
ATOM   1126  CB  PRO A 151      26.842  67.290  33.764  1.00 32.54      A
ATOM   1127  CG  PRO A 151      27.754  66.801  34.962  1.00 32.54      A
ATOM   1128  C   PRO A 151      27.057  65.214  32.397  1.00 38.98      A
ATOM   1129  O   PRO A 151      27.363  64.055  32.666  1.00 38.98      A
ATOM   1130  N   ALA A 152      27.456  65.851  31.296  1.00 38.13      A
ATOM   1131  CA  ALA A 152      28.338  65.221  30.315  1.00 38.13      A
ATOM   1132  CB  ALA A 152      28.853  66.249  29.321  1.00 57.22      A
ATOM   1133  C   ALA A 152      29.507  64.555  31.041  1.00 38.13      A
ATOM   1134  O   ALA A 152      30.630  65.079  31.115  1.00 38.13      A
ATOM   1135  N   GLU A 153      29.184  63.394  31.595  1.00100.07      A
ATOM   1136  CA  GLU A 153      30.083  62.531  32.330  1.00100.07      A
ATOM   1137  CB  GLU A 153      29.921  62.750  33.830  1.00 63.28      A
ATOM   1138  CG  GLU A 153      30.804  61.861  34.672  1.00 63.28      A
```

-14-

```
ATOM   1139  CD   GLU A 153      30.083  61.327  35.895  1.00 63.28      A
ATOM   1140  OE1  GLU A 153      29.707  62.134  36.775  1.00 63.28      A
ATOM   1141  OE2  GLU A 153      29.884  60.094  35.972  1.00 63.28      A
ATOM   1142  C    GLU A 153      29.514  61.186  31.918  1.00100.07      A
ATOM   1143  O    GLU A 153      30.248  60.266  31.557  1.00100.07      A
ATOM   1144  N    ARG A 154      28.184  61.101  31.948  1.00 97.84      A
ATOM   1145  CA   ARG A 154      27.480  59.892  31.549  1.00 97.84      A
ATOM   1146  CB   ARG A 154      26.333  59.588  32.509  1.00100.07      A
ATOM   1147  CG   ARG A 154      26.835  59.067  33.858  1.00100.07      A
ATOM   1148  CD   ARG A 154      25.753  58.328  34.644  1.00100.07      A
ATOM   1149  NE   ARG A 154      26.273  57.725  35.874  1.00100.07      A
ATOM   1150  CZ   ARG A 154      25.573  56.915  36.665  1.00100.07      A
ATOM   1151  NH1  ARG A 154      24.319  56.607  36.358  1.00100.07      A
ATOM   1152  NH2  ARG A 154      26.128  56.407  37.760  1.00100.07      A
ATOM   1153  C    ARG A 154      26.980  60.063  30.130  1.00 97.84      A
ATOM   1154  O    ARG A 154      25.929  60.668  29.889  1.00 97.84      A
ATOM   1155  N    HIS A 155      27.777  59.526  29.206  1.00 33.73      A
ATOM   1156  CA   HIS A 155      27.547  59.567  27.759  1.00 33.73      A
ATOM   1157  CB   HIS A 155      28.605  58.703  27.087  1.00100.07      A
ATOM   1158  CG   HIS A 155      28.798  57.374  27.753  1.00100.07      A
ATOM   1159  CD2  HIS A 155      28.156  56.191  27.590  1.00100.07      A
ATOM   1160  ND1  HIS A 155      29.743  57.164  28.734  1.00100.07      A
ATOM   1161  CE1  HIS A 155      29.680  55.908  29.141  1.00100.07      A
ATOM   1162  NE2  HIS A 155      28.725  55.296  28.462  1.00100.07      A
ATOM   1163  C    HIS A 155      26.181  59.164  27.167  1.00 33.73      A
ATOM   1164  O    HIS A 155      25.329  58.515  27.808  1.00 33.73      A
ATOM   1165  N    GLY A 156      26.008  59.551  25.906  1.00 73.63      A
ATOM   1166  CA   GLY A 156      24.810  59.225  25.156  1.00 73.63      A
ATOM   1167  C    GLY A 156      25.191  58.230  24.065  1.00 73.63      A
ATOM   1168  O    GLY A 156      24.863  58.409  22.889  1.00 73.63      A
ATOM   1169  N    ILE A 157      25.909  57.180  24.462  1.00100.07      A
ATOM   1170  CA   ILE A 157      26.344  56.139  23.535  1.00100.07      A
ATOM   1171  CB   ILE A 157      27.412  55.195  24.182  1.00100.07      A
ATOM   1172  CG2  ILE A 157      27.894  54.156  23.169  1.00100.07      A
ATOM   1173  CG1  ILE A 157      28.614  56.005  24.683  1.00100.07      A
ATOM   1174  CD   ILE A 157      29.309  56.847  23.646  1.00100.07      A
ATOM   1175  C    ILE A 157      25.139  55.307  23.103  1.00100.07      A
ATOM   1176  O    ILE A 157      25.145  54.081  23.220  1.00100.07      A
ATOM   1177  N    LYS A 158      24.103  55.985  22.615  1.00 86.89      A
ATOM   1178  CA   LYS A 158      22.887  55.322  22.154  1.00 86.89      A
ATOM   1179  CB   LYS A 158      21.673  56.195  22.471  1.00 94.08      A
ATOM   1180  CG   LYS A 158      20.346  55.588  22.071  1.00 94.08      A
ATOM   1181  CD   LYS A 158      19.275  56.658  21.978  1.00 94.08      A
ATOM   1182  CE   LYS A 158      18.080  56.183  21.166  1.00 94.08      A
ATOM   1183  NZ   LYS A 158      17.231  57.331  20.740  1.00 94.08      A
ATOM   1184  C    LYS A 158      23.019  55.136  20.647  1.00 86.89      A
ATOM   1185  O    LYS A 158      23.473  54.091  20.170  1.00 86.89      A
ATOM   1186  N    ASP A 159      22.618  56.159  19.902  1.00 37.45      A
ATOM   1187  CA   ASP A 159      22.722  56.139  18.448  1.00 37.45      A
ATOM   1188  CB   ASP A 159      21.834  57.243  17.857  1.00100.07      A
ATOM   1189  CG   ASP A 159      21.704  57.154  16.349  1.00100.07      A
ATOM   1190  OD1  ASP A 159      22.702  57.415  15.642  1.00100.07      A
ATOM   1191  OD2  ASP A 159      20.598  56.825  15.869  1.00100.07      A
ATOM   1192  C    ASP A 159      24.198  56.424  18.190  1.00 37.45      A
ATOM   1193  O    ASP A 159      24.554  57.212  17.305  1.00 37.45      A
ATOM   1194  N    ARG A 160      25.040  55.776  18.998  1.00100.07      A
ATOM   1195  CA   ARG A 160      26.490  55.930  18.945  1.00100.07      A
ATOM   1196  CB   ARG A 160      27.194  54.577  19.099  1.00100.07      A
ATOM   1197  CG   ARG A 160      28.723  54.671  18.980  1.00100.07      A
ATOM   1198  CD   ARG A 160      29.369  55.377  20.176  1.00100.07      A
ATOM   1199  NE   ARG A 160      30.564  56.136  19.801  1.00100.07      A
ATOM   1200  CZ   ARG A 160      31.557  56.443  20.634  1.00100.07      A
ATOM   1201  NH1  ARG A 160      31.515  56.051  21.903  1.00100.07      A
ATOM   1202  NH2  ARG A 160      32.592  57.152  20.199  1.00100.07      A
ATOM   1203  C    ARG A 160      26.941  56.589  17.664  1.00100.07      A
ATOM   1204  O    ARG A 160      27.352  55.892  16.737  1.00100.07      A
ATOM   1205  N    ILE A 161      26.860  57.922  17.610  1.00 52.94      A
ATOM   1206  CA   ILE A 161      27.275  58.641  16.413  1.00 52.94      A
ATOM   1207  CB   ILE A 161      26.764  57.886  15.141  1.00 60.99      A
ATOM   1208  CG2  ILE A 161      26.149  58.843  14.152  1.00 60.99      A
ATOM   1209  CG1  ILE A 161      27.925  57.115  14.500  1.00 60.99      A
ATOM   1210  CD   ILE A 161      27.504  55.849  13.786  1.00 60.99      A
ATOM   1211  C    ILE A 161      26.923  60.117  16.264  1.00 52.94      A
ATOM   1212  O    ILE A 161      27.590  60.840  15.522  1.00 52.94      A
ATOM   1213  N    ASN A 162      25.878  60.572  16.939  1.00 99.95      A
ATOM   1214  CA   ASN A 162      25.502  61.975  16.837  1.00 99.95      A
ATOM   1215  CB   ASN A 162      24.505  62.166  15.694  1.00 96.68      A
ATOM   1216  CG   ASN A 162      24.995  61.559  14.386  1.00 96.68      A
ATOM   1217  OD1  ASN A 162      26.119  61.810  13.947  1.00 96.68      A
ATOM   1218  ND2  ASN A 162      24.146  60.756  13.757  1.00 96.68      A
ATOM   1219  C    ASN A 162      24.905  62.399  18.163  1.00 99.95      A
ATOM   1220  O    ASN A 162      24.515  63.544  18.365  1.00 99.95      A
ATOM   1221  N    ALA A 163      24.872  61.437  19.066  1.00 51.97      A
ATOM   1222  CA   ALA A 163      24.337  61.587  20.402  1.00 51.97      A
```

-15-

```
ATOM   1223  CB   ALA A 163      25.087  60.647  21.333  1.00100.07      A
ATOM   1224  C    ALA A 163      24.279  62.980  21.037  1.00 51.97      A
ATOM   1225  O    ALA A 163      23.253  63.358  21.607  1.00 51.97      A
ATOM   1226  N    ILE A 164      25.369  63.737  20.948  1.00 40.41      A
ATOM   1227  CA   ILE A 164      25.456  65.060  21.588  1.00 40.41      A
ATOM   1228  CB   ILE A 164      24.715  66.208  20.805  1.00 22.84      A
ATOM   1229  CG2  ILE A 164      25.247  66.343  19.377  1.00 22.84      A
ATOM   1230  CG1  ILE A 164      23.215  65.966  20.793  1.00 22.84      A
ATOM   1231  CD   ILE A 164      22.472  67.120  20.245  1.00 22.84      A
ATOM   1232  C    ILE A 164      24.834  64.991  22.976  1.00 40.41      A
ATOM   1233  O    ILE A 164      24.163  65.921  23.396  1.00 40.41      A
ATOM   1234  N    PRO A 165      25.101  63.912  23.728  1.00 16.22      A
ATOM   1235  CD   PRO A 165      26.390  63.209  23.641  1.00 26.38      A
ATOM   1236  CA   PRO A 165      24.531  63.743  25.075  1.00 16.22      A
ATOM   1237  CB   PRO A 165      25.573  62.880  25.799  1.00 26.38      A
ATOM   1238  CG   PRO A 165      26.835  63.215  25.077  1.00 26.38      A
ATOM   1239  C    PRO A 165      24.240  65.048  25.793  1.00 16.22      A
ATOM   1240  O    PRO A 165      25.107  65.913  25.890  1.00 16.22      A
ATOM   1241  N    VAL A 166      23.003  65.197  26.256  1.00 48.47      A
ATOM   1242  CA   VAL A 166      22.601  66.395  26.971  1.00 48.47      A
ATOM   1243  CB   VAL A 166      21.175  66.826  26.611  1.00 39.93      A
ATOM   1244  CG1  VAL A 166      20.750  67.993  27.472  1.00 39.93      A
ATOM   1245  CG2  VAL A 166      21.121  67.231  25.174  1.00 39.93      A
ATOM   1246  C    VAL A 166      22.680  66.107  28.453  1.00 48.47      A
ATOM   1247  O    VAL A 166      22.681  64.943  28.875  1.00 48.47      A
ATOM   1248  N    ASP A 167      22.754  67.174  29.240  1.00 51.97      A
ATOM   1249  CA   ASP A 167      22.861  67.049  30.679  1.00 51.97      A
ATOM   1250  CB   ASP A 167      23.156  68.417  31.292  1.00 67.98      A
ATOM   1251  CG   ASP A 167      24.547  68.917  30.956  1.00 67.98      A
ATOM   1252  OD1  ASP A 167      25.538  68.343  31.461  1.00 67.98      A
ATOM   1253  OD2  ASP A 167      24.646  69.885  30.178  1.00 67.98      A
ATOM   1254  C    ASP A 167      21.621  66.456  31.316  1.00 51.97      A
ATOM   1255  O    ASP A 167      20.568  66.354  30.690  1.00 51.97      A
ATOM   1256  N    ALA A 168      21.769  66.051  32.570  1.00 49.41      A
ATOM   1257  CA   ALA A 168      20.669  65.486  33.333  1.00 49.41      A
ATOM   1258  CB   ALA A 168      21.119  64.225  34.076  1.00100.07      A
ATOM   1259  C    ALA A 168      20.158  66.525  34.328  1.00 49.41      A
ATOM   1260  O    ALA A 168      20.790  67.541  34.598  1.00 49.41      A
ATOM   1261  N    ILE A 169      18.981  66.271  34.851  1.00 47.41      A
ATOM   1262  CA   ILE A 169      18.382  67.153  35.809  1.00 47.41      A
ATOM   1263  CB   ILE A 169      17.881  68.479  35.193  1.00100.07      A
ATOM   1264  CG2  ILE A 169      18.325  69.629  36.057  1.00100.07      A
ATOM   1265  CG1  ILE A 169      18.410  68.675  33.774  1.00100.07      A
ATOM   1266  CD   ILE A 169      17.772  67.765  32.752  1.00100.07      A
ATOM   1267  C    ILE A 169      17.193  66.341  36.232  1.00 47.41      A
ATOM   1268  O    ILE A 169      16.077  66.563  35.763  1.00 47.41      A
ATOM   1269  N    PHE A 170      17.437  65.364  37.091  1.00 56.10      A
ATOM   1270  CA   PHE A 170      16.359  64.515  37.552  1.00 56.10      A
ATOM   1271  CB   PHE A 170      16.939  63.223  38.115  1.00 52.95      A
ATOM   1272  CG   PHE A 170      17.797  62.481  37.132  1.00 52.95      A
ATOM   1273  CD1  PHE A 170      17.279  62.070  35.907  1.00 52.95      A
ATOM   1274  CD2  PHE A 170      19.125  62.197  37.422  1.00 52.95      A
ATOM   1275  CE1  PHE A 170      18.072  61.392  34.994  1.00 52.95      A
ATOM   1276  CE2  PHE A 170      19.923  61.516  36.510  1.00 52.95      A
ATOM   1277  CZ   PHE A 170      19.396  61.115  35.298  1.00 52.95      A
ATOM   1278  C    PHE A 170      15.510  65.248  38.595  1.00 56.10      A
ATOM   1279  O    PHE A 170      14.856  66.241  38.274  1.00 56.10      A
ATOM   1280  N    SER A 171      15.532  64.761  39.834  1.00 56.78      A
ATOM   1281  CA   SER A 171      14.767  65.346  40.936  1.00 56.78      A
ATOM   1282  CB   SER A 171      15.698  65.978  41.967  1.00 41.35      A
ATOM   1283  OG   SER A 171      14.944  66.683  42.937  1.00 41.35      A
ATOM   1284  C    SER A 171      13.739  66.380  40.513  1.00 56.78      A
ATOM   1285  O    SER A 171      14.081  67.507  40.180  1.00 56.78      A
ATOM   1286  N    PRO A 172      12.456  66.013  40.543  1.00 38.33      A
ATOM   1287  CD   PRO A 172      11.908  64.678  40.827  1.00 27.85      A
ATOM   1288  CA   PRO A 172      11.389  66.931  40.151  1.00 38.33      A
ATOM   1289  CB   PRO A 172      10.276  65.991  39.742  1.00 27.85      A
ATOM   1290  CG   PRO A 172      10.409  64.935  40.774  1.00 27.85      A
ATOM   1291  C    PRO A 172      10.942  67.887  41.228  1.00 38.33      A
ATOM   1292  O    PRO A 172      10.072  68.717  40.988  1.00 38.33      A
ATOM   1293  N    VAL A 173      11.496  67.758  42.424  1.00 21.94      A
ATOM   1294  CA   VAL A 173      11.142  68.684  43.481  1.00 21.94      A
ATOM   1295  CB   VAL A 173      11.833  68.295  44.775  1.00 56.09      A
ATOM   1296  CG1  VAL A 173      11.568  69.332  45.820  1.00 56.09      A
ATOM   1297  CG2  VAL A 173      11.333  66.934  45.235  1.00 56.09      A
ATOM   1298  C    VAL A 173      11.715  69.992  42.956  1.00 21.94      A
ATOM   1299  O    VAL A 173      12.922  70.083  42.732  1.00 21.94      A
ATOM   1300  N    ARG A 174      10.860  70.994  42.747  1.00 51.23      A
ATOM   1301  CA   ARG A 174      11.293  72.279  42.182  1.00 51.23      A
ATOM   1302  CB   ARG A 174      10.345  72.661  41.028  1.00100.00      A
ATOM   1303  CG   ARG A 174      10.795  73.840  40.182  1.00100.00      A
ATOM   1304  CD   ARG A 174      12.272  73.730  39.908  1.00100.00      A
ATOM   1305  NE   ARG A 174      12.736  74.650  38.880  1.00100.00      A
ATOM   1306  CZ   ARG A 174      14.021  74.882  38.630  1.00100.00      A
```

-16-

```
ATOM   1307  NH1 ARG A 174      14.956  74.265  39.343  1.00100.00      A
ATOM   1308  NH2 ARG A 174      14.376  75.714  37.656  1.00100.00      A
ATOM   1309  C   ARG A 174      11.452  73.469  43.137  1.00 51.23      A
ATOM   1310  O   ARG A 174      11.802  74.567  42.717  1.00 51.23      A
ATOM   1311  N   ARG A 175      11.221  73.245  44.422  1.00 24.40      A
ATOM   1312  CA  ARG A 175      11.333  74.302  45.419  1.00 24.40      A
ATOM   1313  CB  ARG A 175      10.472  75.484  44.973  1.00 46.83      A
ATOM   1314  CG  ARG A 175      10.416  76.649  45.911  1.00 46.83      A
ATOM   1315  CD  ARG A 175       9.769  77.818  45.203  1.00 46.83      A
ATOM   1316  NE  ARG A 175       9.080  78.729  46.115  1.00 46.83      A
ATOM   1317  CZ  ARG A 175       8.459  79.841  45.725  1.00 46.83      A
ATOM   1318  NH1 ARG A 175       8.449  80.181  44.437  1.00 46.83      A
ATOM   1319  NH2 ARG A 175       7.837  80.608  46.616  1.00 46.83      A
ATOM   1320  C   ARG A 175      10.808  73.652  46.703  1.00 24.40      A
ATOM   1321  O   ARG A 175       9.964  72.769  46.633  1.00 24.40      A
ATOM   1322  N   VAL A 176      11.312  74.057  47.864  1.00 50.40      A
ATOM   1323  CA  VAL A 176      10.875  73.467  49.137  1.00 50.40      A
ATOM   1324  CB  VAL A 176      11.639  72.126  49.452  1.00  5.23      A
ATOM   1325  CG1 VAL A 176      11.188  71.565  50.791  1.00  5.23      A
ATOM   1326  CG2 VAL A 176      11.447  71.110  48.351  1.00  5.23      A
ATOM   1327  C   VAL A 176      11.108  74.403  50.333  1.00 50.40      A
ATOM   1328  O   VAL A 176      12.242  74.536  50.827  1.00 50.40      A
ATOM   1329  N   ALA A 177      10.038  75.040  50.802  1.00 73.68      A
ATOM   1330  CA  ALA A 177      10.125  75.936  51.955  1.00 73.68      A
ATOM   1331  CB  ALA A 177       9.717  77.367  51.551  1.00 18.59      A
ATOM   1332  C   ALA A 177       9.208  75.400  53.057  1.00 73.68      A
ATOM   1333  O   ALA A 177       8.647  74.312  52.927  1.00 73.68      A
ATOM   1334  N   PHE A 178       9.082  76.144  54.148  1.00100.07      A
ATOM   1335  CA  PHE A 178       8.196  75.751  55.239  1.00100.07      A
ATOM   1336  CB  PHE A 178       8.518  74.313  55.714  1.00 30.14      A
ATOM   1337  CG  PHE A 178       9.759  74.172  56.548  1.00 30.14      A
ATOM   1338  CD1 PHE A 178       9.782  74.587  57.876  1.00 30.14      A
ATOM   1339  CD2 PHE A 178      10.877  73.523  56.038  1.00 30.14      A
ATOM   1340  CE1 PHE A 178      10.905  74.343  58.685  1.00 30.14      A
ATOM   1341  CE2 PHE A 178      12.005  73.279  56.844  1.00 30.14      A
ATOM   1342  CZ  PHE A 178      12.014  73.686  58.162  1.00 30.14      A
ATOM   1343  C   PHE A 178       8.211  76.770  56.372  1.00100.07      A
ATOM   1344  O   PHE A 178       8.983  77.725  56.325  1.00100.07      A
ATOM   1345  N   GLN A 179       7.350  76.605  57.370  1.00 51.57      A
ATOM   1346  CA  GLN A 179       7.318  77.579  58.457  1.00 51.57      A
ATOM   1347  CB  GLN A 179       6.322  78.681  58.113  1.00 99.76      A
ATOM   1348  CG  GLN A 179       6.833  79.639  57.071  1.00 99.76      A
ATOM   1349  CD  GLN A 179       5.748  80.537  56.544  1.00 99.76      A
ATOM   1350  OE1 GLN A 179       4.724  80.740  57.200  1.00 99.76      A
ATOM   1351  NE2 GLN A 179       5.966  81.094  55.356  1.00 99.76      A
ATOM   1352  C   GLN A 179       6.960  76.979  59.805  1.00 51.57      A
ATOM   1353  O   GLN A 179       6.040  76.175  59.915  1.00 51.57      A
ATOM   1354  N   VAL A 180       7.693  77.362  60.835  1.00 86.87      A
ATOM   1355  CA  VAL A 180       7.386  76.852  62.154  1.00 86.87      A
ATOM   1356  CB  VAL A 180       8.669  76.574  62.958  1.00 48.36      A
ATOM   1357  CG1 VAL A 180       8.313  76.074  64.349  1.00 48.36      A
ATOM   1358  CG2 VAL A 180       9.525  75.543  62.231  1.00 48.36      A
ATOM   1359  C   VAL A 180       6.541  77.915  62.845  1.00 86.87      A
ATOM   1360  O   VAL A 180       7.072  78.856  63.437  1.00 86.87      A
ATOM   1361  N   GLU A 181       5.221  77.768  62.746  1.00100.07      A
ATOM   1362  CA  GLU A 181       4.273  78.712  63.343  1.00100.07      A
ATOM   1363  CB  GLU A 181       2.938  78.666  62.596  1.00 72.17      A
ATOM   1364  CG  GLU A 181       3.031  78.951  61.128  1.00 72.17      A
ATOM   1365  CD  GLU A 181       3.100  80.429  60.840  1.00 72.17      A
ATOM   1366  OE1 GLU A 181       3.556  81.181  61.734  1.00 72.17      A
ATOM   1367  OE2 GLU A 181       2.707  80.832  59.718  1.00 72.17      A
ATOM   1368  C   GLU A 181       3.978  78.365  64.784  1.00100.07      A
ATOM   1369  O   GLU A 181       4.394  77.320  65.290  1.00100.07      A
ATOM   1370  N   ASP A 182       3.236  79.254  65.431  1.00 99.56      A
ATOM   1371  CA  ASP A 182       2.823  79.048  66.805  1.00 99.56      A
ATOM   1372  CB  ASP A 182       2.886  80.361  67.581  1.00100.07      A
ATOM   1373  CG  ASP A 182       4.304  80.790  67.867  1.00100.07      A
ATOM   1374  OD1 ASP A 182       5.052  79.988  68.473  1.00100.07      A
ATOM   1375  OD2 ASP A 182       4.664  81.923  67.488  1.00100.07      A
ATOM   1376  C   ASP A 182       1.391  78.534  66.733  1.00 99.56      A
ATOM   1377  O   ASP A 182       0.493  79.223  66.240  1.00 99.56      A
ATOM   1378  N   THR A 183       1.189  77.308  67.205  1.00100.07      A
ATOM   1379  CA  THR A 183      -0.129  76.702  67.180  1.00100.07      A
ATOM   1380  CB  THR A 183      -0.071  75.216  67.606  1.00100.07      A
ATOM   1381  OG1 THR A 183      -1.405  74.709  67.744  1.00100.07      A
ATOM   1382  CG2 THR A 183       0.677  75.057  68.924  1.00100.07      A
ATOM   1383  C   THR A 183      -1.123  77.431  68.063  1.00100.07      A
ATOM   1384  O   THR A 183      -1.615  78.512  67.708  1.00100.07      A
ATOM   1385  N   ARG A 184      -1.393  76.822  69.217  1.00 69.50      A
ATOM   1386  CA  ARG A 184      -2.334  77.313  70.216  1.00 69.50      A
ATOM   1387  CB  ARG A 184      -3.382  78.244  69.568  1.00100.07      A
ATOM   1388  CG  ARG A 184      -4.731  78.353  70.288  1.00100.07      A
ATOM   1389  CD  ARG A 184      -5.779  77.375  69.723  1.00100.07      A
ATOM   1390  NE  ARG A 184      -7.057  77.467  70.440  1.00100.07      A
```

-17-

```
ATOM   1391  CZ   ARG A 184     -8.110  76.672  70.234  1.00100.07      A
ATOM   1392  NH1  ARG A 184     -8.056  75.707  69.322  1.00100.07      A
ATOM   1393  NH2  ARG A 184     -9.219  76.834  70.953  1.00100.07      A
ATOM   1394  C    ARG A 184     -3.021  76.056  70.750  1.00 69.50      A
ATOM   1395  O    ARG A 184     -3.281  75.096  70.013  1.00 69.50      A
ATOM   1396  N    LEU A 185     -3.315  76.099  72.041  1.00100.07      A
ATOM   1397  CA   LEU A 185     -3.944  75.016  72.775  1.00100.07      A
ATOM   1398  CB   LEU A 185     -5.447  74.934  72.482  1.00 86.73      A
ATOM   1399  CG   LEU A 185     -6.248  75.931  73.343  1.00 86.73      A
ATOM   1400  CD1  LEU A 185     -7.725  75.600  73.244  1.00 86.73      A
ATOM   1401  CD2  LEU A 185     -5.800  75.865  74.810  1.00 86.73      A
ATOM   1402  C    LEU A 185     -3.293  73.641  72.709  1.00100.07      A
ATOM   1403  O    LEU A 185     -3.091  73.043  71.649  1.00100.07      A
ATOM   1404  N    GLY A 186     -2.973  73.175  73.910  1.00100.07      A
ATOM   1405  CA   GLY A 186     -2.315  71.908  74.137  1.00100.07      A
ATOM   1406  C    GLY A 186     -1.383  72.200  75.302  1.00100.07      A
ATOM   1407  O    GLY A 186     -0.848  71.295  75.959  1.00100.07      A
ATOM   1408  N    GLN A 187     -1.226  73.504  75.546  1.00100.07      A
ATOM   1409  CA   GLN A 187     -0.386  74.080  76.597  1.00100.07      A
ATOM   1410  CB   GLN A 187      0.836  73.186  76.860  1.00 98.59      A
ATOM   1411  CG   GLN A 187      1.811  73.705  77.904  1.00 98.59      A
ATOM   1412  CD   GLN A 187      2.936  72.722  78.190  1.00 98.59      A
ATOM   1413  OE1  GLN A 187      3.609  72.250  77.276  1.00 98.59      A
ATOM   1414  NE2  GLN A 187      3.146  72.414  79.464  1.00 98.59      A
ATOM   1415  C    GLN A 187      0.065  75.445  76.086  1.00100.07      A
ATOM   1416  O    GLN A 187     -0.259  75.827  74.960  1.00100.07      A
ATOM   1417  N    ARG A 188      0.820  76.176  76.899  1.00 99.87      A
ATOM   1418  CA   ARG A 188      1.279  77.503  76.506  1.00 99.87      A
ATOM   1419  CB   ARG A 188      2.149  78.112  77.612  1.00100.07      A
ATOM   1420  CG   ARG A 188      1.317  78.786  78.700  1.00100.07      A
ATOM   1421  CD   ARG A 188      2.167  79.285  79.857  1.00100.07      A
ATOM   1422  NE   ARG A 188      1.411  80.204  80.707  1.00100.07      A
ATOM   1423  CZ   ARG A 188      1.877  80.766  81.820  1.00100.07      A
ATOM   1424  NH1  ARG A 188      3.111  80.505  82.239  1.00100.07      A
ATOM   1425  NH2  ARG A 188      1.107  81.602  82.509  1.00100.07      A
ATOM   1426  C    ARG A 188      1.980  77.592  75.153  1.00 99.87      A
ATOM   1427  O    ARG A 188      2.854  76.787  74.831  1.00 99.87      A
ATOM   1428  N    THR A 189      1.559  78.587  74.374  1.00100.07      A
ATOM   1429  CA   THR A 189      2.077  78.863  73.033  1.00100.07      A
ATOM   1430  CB   THR A 189      2.503  80.348  72.881  1.00100.07      A
ATOM   1431  OG1  THR A 189      1.332  81.167  72.741  1.00100.07      A
ATOM   1432  CG2  THR A 189      3.408  80.534  71.651  1.00100.07      A
ATOM   1433  C    THR A 189      3.238  77.991  72.568  1.00100.07      A
ATOM   1434  O    THR A 189      3.096  77.227  71.605  1.00100.07      A
ATOM   1435  N    ASP A 190      4.382  78.137  73.240  1.00 96.21      A
ATOM   1436  CA   ASP A 190      5.588  77.376  72.926  1.00 96.21      A
ATOM   1437  CB   ASP A 190      5.867  76.334  74.019  1.00 99.97      A
ATOM   1438  CG   ASP A 190      6.367  76.943  75.313  1.00 99.97      A
ATOM   1439  OD1  ASP A 190      7.403  77.643  75.273  1.00 99.97      A
ATOM   1440  OD2  ASP A 190      5.732  76.708  76.368  1.00 99.97      A
ATOM   1441  C    ASP A 190      5.452  76.630  71.616  1.00 96.21      A
ATOM   1442  O    ASP A 190      5.961  77.051  70.580  1.00 96.21      A
ATOM   1443  N    LEU A 191      4.745  75.510  71.706  1.00 88.88      A
ATOM   1444  CA   LEU A 191      4.483  74.620  70.594  1.00 88.88      A
ATOM   1445  CB   LEU A 191      3.076  74.051  70.700  1.00 82.14      A
ATOM   1446  CG   LEU A 191      2.676  73.433  72.032  1.00 82.14      A
ATOM   1447  CD1  LEU A 191      1.383  72.671  71.805  1.00 82.14      A
ATOM   1448  CD2  LEU A 191      3.769  72.508  72.566  1.00 82.14      A
ATOM   1449  C    LEU A 191      4.660  75.214  69.212  1.00 88.88      A
ATOM   1450  O    LEU A 191      4.358  76.388  68.967  1.00 88.88      A
ATOM   1451  N    ASP A 192      5.134  74.360  68.310  1.00 97.03      A
ATOM   1452  CA   ASP A 192      5.383  74.718  66.927  1.00 97.03      A
ATOM   1453  CB   ASP A 192      6.744  74.172  66.494  1.00100.07      A
ATOM   1454  CG   ASP A 192      7.785  74.256  67.596  1.00100.07      A
ATOM   1455  OD1  ASP A 192      8.067  75.379  68.066  1.00100.07      A
ATOM   1456  OD2  ASP A 192      8.321  73.198  67.994  1.00100.07      A
ATOM   1457  C    ASP A 192      4.294  74.099  66.052  1.00 97.03      A
ATOM   1458  O    ASP A 192      3.673  73.110  66.439  1.00 97.03      A
ATOM   1459  N    LYS A 193      4.066  74.685  64.880  1.00 30.13      A
ATOM   1460  CA   LYS A 193      3.073  74.182  63.936  1.00 30.13      A
ATOM   1461  CB   LYS A 193      1.833  75.071  63.963  1.00 88.42      A
ATOM   1462  CG   LYS A 193      0.919  74.908  62.762  1.00 88.42      A
ATOM   1463  CD   LYS A 193      0.025  76.119  62.617  1.00 88.42      A
ATOM   1464  CE   LYS A 193     -0.670  76.138  61.280  1.00 88.42      A
ATOM   1465  NZ   LYS A 193     -1.297  77.462  61.048  1.00 88.42      A
ATOM   1466  C    LYS A 193      3.670  74.183  62.527  1.00 30.13      A
ATOM   1467  O    LYS A 193      3.632  75.212  61.836  1.00 30.13      A
ATOM   1468  N    LEU A 194      4.205  73.030  62.105  1.00 31.31      A
ATOM   1469  CA   LEU A 194      4.850  72.873  60.790  1.00 31.31      A
ATOM   1470  CB   LEU A 194      5.268  71.422  60.604  1.00 34.90      A
ATOM   1471  CG   LEU A 194      6.671  71.285  60.020  1.00 34.90      A
ATOM   1472  CD1  LEU A 194      7.490  70.294  60.834  1.00 34.90      A
ATOM   1473  CD2  LEU A 194      6.566  70.857  58.590  1.00 34.90      A
ATOM   1474  C    LEU A 194      3.964  73.315  59.630  1.00 31.31      A
```

-18-

```
ATOM   1475  O    LEU A 194      2.958  73.993  59.844  1.00 31.31      A
ATOM   1476  N    THR A 195      4.321  72.941  58.404  1.00 32.61      A
ATOM   1477  CA   THR A 195      3.510  73.364  57.265  1.00 32.61      A
ATOM   1478  CB   THR A 195      3.084  74.840  57.441  1.00 82.69      A
ATOM   1479  OG1  THR A 195      2.132  75.199  56.436  1.00 82.69      A
ATOM   1480  CG2  THR A 195      4.301  75.756  57.332  1.00 82.69      A
ATOM   1481  C    THR A 195      4.193  73.264  55.900  1.00 32.61      A
ATOM   1482  O    THR A 195      3.767  73.942  54.966  1.00 32.61      A
ATOM   1483  N    LEU A 196      5.217  72.424  55.751  1.00 44.55      A
ATOM   1484  CA   LEU A 196      5.933  72.366  54.470  1.00 44.55      A
ATOM   1485  CB   LEU A 196      7.018  71.281  54.486  1.00 31.90      A
ATOM   1486  CG   LEU A 196      6.714  69.816  54.729  1.00 31.90      A
ATOM   1487  CD1  LEU A 196      7.990  69.100  55.175  1.00 31.90      A
ATOM   1488  CD2  LEU A 196      5.669  69.706  55.793  1.00 31.90      A
ATOM   1489  C    LEU A 196      5.105  72.265  53.216  1.00 44.55      A
ATOM   1490  O    LEU A 196      4.207  71.433  53.108  1.00 44.55      A
ATOM   1491  N    ARG A 197      5.433  73.146  52.273  1.00 46.84      A
ATOM   1492  CA   ARG A 197      4.737  73.253  50.997  1.00 46.84      A
ATOM   1493  CB   ARG A 197      4.976  74.644  50.402  1.00 54.72      A
ATOM   1494  CG   ARG A 197      4.749  75.804  51.384  1.00 54.72      A
ATOM   1495  CD   ARG A 197      4.243  77.010  50.621  1.00 54.72      A
ATOM   1496  NE   ARG A 197      4.582  78.285  51.237  1.00 54.72      A
ATOM   1497  CZ   ARG A 197      4.340  79.459  50.659  1.00 54.72      A
ATOM   1498  NH1  ARG A 197      3.755  79.497  49.467  1.00 54.72      A
ATOM   1499  NH2  ARG A 197      4.703  80.592  51.249  1.00 54.72      A
ATOM   1500  C    ARG A 197      5.129  72.167  49.986  1.00 46.84      A
ATOM   1501  O    ARG A 197      4.317  71.298  49.667  1.00 46.84      A
ATOM   1502  N    ILE A 198      6.365  72.221  49.491  1.00 33.53      A
ATOM   1503  CA   ILE A 198      6.876  71.260  48.508  1.00 33.53      A
ATOM   1504  CB   ILE A 198      6.366  69.829  48.798  1.00 31.98      A
ATOM   1505  CG2  ILE A 198      6.661  68.896  47.640  1.00 31.98      A
ATOM   1506  CG1  ILE A 198      7.039  69.321  50.082  1.00 31.98      A
ATOM   1507  CD   ILE A 198      7.115  67.786  50.217  1.00 31.98      A
ATOM   1508  C    ILE A 198      6.472  71.698  47.114  1.00 33.53      A
ATOM   1509  O    ILE A 198      6.077  70.905  46.284  1.00 33.53      A
ATOM   1510  N    TRP A 199      6.622  72.991  46.875  1.00100.07      A
ATOM   1511  CA   TRP A 199      6.251  73.655  45.632  1.00100.07      A
ATOM   1512  CB   TRP A 199      7.323  74.658  45.251  1.00 99.57      A
ATOM   1513  CG   TRP A 199      6.687  75.861  44.709  1.00 99.57      A
ATOM   1514  CD2  TRP A 199      6.225  76.980  45.466  1.00 99.57      A
ATOM   1515  CE2  TRP A 199      5.583  77.852  44.565  1.00 99.57      A
ATOM   1516  CE3  TRP A 199      6.292  77.330  46.823  1.00 99.57      A
ATOM   1517  CD1  TRP A 199      6.323  76.086  43.421  1.00 99.57      A
ATOM   1518  NE1  TRP A 199      5.657  77.280  43.322  1.00 99.57      A
ATOM   1519  CZ2  TRP A 199      5.005  79.064  44.976  1.00 99.57      A
ATOM   1520  CZ3  TRP A 199      5.719  78.532  47.232  1.00 99.57      A
ATOM   1521  CH2  TRP A 199      5.084  79.386  46.309  1.00 99.57      A
ATOM   1522  C    TRP A 199      5.790  72.979  44.352  1.00100.07      A
ATOM   1523  O    TRP A 199      4.617  72.644  44.209  1.00100.07      A
ATOM   1524  N    THR A 200      6.692  72.835  43.391  1.00 68.48      A
ATOM   1525  CA   THR A 200      6.319  72.236  42.111  1.00 68.48      A
ATOM   1526  CB   THR A 200      6.737  73.178  40.936  1.00 87.15      A
ATOM   1527  OG1  THR A 200      6.139  74.467  41.122  1.00 87.15      A
ATOM   1528  CG2  THR A 200      6.291  72.627  39.594  1.00 87.15      A
ATOM   1529  C    THR A 200      6.976  70.870  41.935  1.00 68.48      A
ATOM   1530  O    THR A 200      7.706  70.386  42.806  1.00 68.48      A
ATOM   1531  N    ASP A 201      6.692  70.252  40.800  1.00 31.77      A
ATOM   1532  CA   ASP A 201      7.241  68.964  40.483  1.00 31.77      A
ATOM   1533  CB   ASP A 201      6.380  67.867  41.088  1.00 88.26      A
ATOM   1534  CG   ASP A 201      6.183  68.052  42.561  1.00 88.26      A
ATOM   1535  OD1  ASP A 201      5.102  68.533  42.952  1.00 88.26      A
ATOM   1536  OD2  ASP A 201      7.117  67.738  43.327  1.00 88.26      A
ATOM   1537  C    ASP A 201      7.385  68.754  38.980  1.00 31.77      A
ATOM   1538  O    ASP A 201      6.566  69.236  38.169  1.00 31.77      A
ATOM   1539  N    GLY A 202      8.463  68.059  38.618  1.00 58.84      A
ATOM   1540  CA   GLY A 202      8.681  67.736  37.230  1.00 58.84      A
ATOM   1541  C    GLY A 202      7.467  66.868  36.954  1.00 58.84      A
ATOM   1542  O    GLY A 202      6.430  67.366  36.485  1.00 58.84      A
ATOM   1543  N    SER A 203      7.580  65.581  37.302  1.00 66.27      A
ATOM   1544  CA   SER A 203      6.497  64.618  37.102  1.00 66.27      A
ATOM   1545  CB   SER A 203      7.030  63.309  36.511  1.00 89.23      A
ATOM   1546  OG   SER A 203      7.849  62.622  37.432  1.00 89.23      A
ATOM   1547  C    SER A 203      5.691  64.315  38.366  1.00 66.27      A
ATOM   1548  O    SER A 203      4.597  64.856  38.530  1.00 66.27      A
ATOM   1549  N    VAL A 204      6.243  63.465  39.243  1.00 42.74      A
ATOM   1550  CA   VAL A 204      5.610  63.032  40.508  1.00 42.74      A
ATOM   1551  CB   VAL A 204      6.607  62.209  41.417  1.00 21.15      A
ATOM   1552  CG1  VAL A 204      7.944  62.046  40.738  1.00 21.15      A
ATOM   1553  CG2  VAL A 204      6.793  62.879  42.764  1.00 21.15      A
ATOM   1554  C    VAL A 204      4.972  64.117  41.390  1.00 42.74      A
ATOM   1555  O    VAL A 204      5.099  65.314  41.127  1.00 42.74      A
ATOM   1556  N    THR A 205      4.293  63.684  42.452  1.00 21.70      A
ATOM   1557  CA   THR A 205      3.617  64.619  43.348  1.00 21.70      A
ATOM   1558  CB   THR A 205      2.108  64.347  43.399  1.00 74.21      A
```

```
ATOM   1559  OG1 THR A 205      1.876  63.080  44.030  1.00 74.21      A
ATOM   1560  CG2 THR A 205      1.521  64.351  41.985  1.00 74.21      A
ATOM   1561  C   THR A 205      4.120  64.675  44.794  1.00 21.70      A
ATOM   1562  O   THR A 205      4.462  63.656  45.402  1.00 21.70      A
ATOM   1563  N   PRO A 206      4.121  65.890  45.368  1.00 17.57      A
ATOM   1564  CD  PRO A 206      3.336  67.024  44.848  1.00 23.29      A
ATOM   1565  CA  PRO A 206      4.563  66.175  46.725  1.00 17.57      A
ATOM   1566  CB  PRO A 206      3.730  67.384  47.102  1.00 23.29      A
ATOM   1567  CG  PRO A 206      3.667  68.108  45.834  1.00 23.29      A
ATOM   1568  C   PRO A 206      4.290  65.002  47.621  1.00 17.57      A
ATOM   1569  O   PRO A 206      5.221  64.344  48.070  1.00 17.57      A
ATOM   1570  N   LEU A 207      3.012  64.740  47.883  1.00 66.62      A
ATOM   1571  CA  LEU A 207      2.637  63.621  48.739  1.00 66.62      A
ATOM   1572  CB  LEU A 207      1.264  63.075  48.348  1.00100.07      A
ATOM   1573  CG  LEU A 207      0.807  61.885  49.197  1.00100.07      A
ATOM   1574  CD1 LEU A 207      0.394  62.392  50.572  1.00100.07      A
ATOM   1575  CD2 LEU A 207     -0.347  61.153  48.516  1.00100.07      A
ATOM   1576  C   LEU A 207      3.677  62.516  48.567  1.00 66.62      A
ATOM   1577  O   LEU A 207      4.303  62.063  49.533  1.00 66.62      A
ATOM   1578  N   GLU A 208      3.861  62.104  47.316  1.00 83.94      A
ATOM   1579  CA  GLU A 208      4.828  61.073  46.987  1.00 83.94      A
ATOM   1580  CB  GLU A 208      4.791  60.763  45.484  1.00 86.72      A
ATOM   1581  CG  GLU A 208      3.448  60.239  44.974  1.00 86.72      A
ATOM   1582  CD  GLU A 208      3.461  59.883  43.485  1.00 86.72      A
ATOM   1583  OE1 GLU A 208      4.193  58.946  43.086  1.00 86.72      A
ATOM   1584  OE2 GLU A 208      2.729  60.544  42.715  1.00 86.72      A
ATOM   1585  C   GLU A 208      6.223  61.548  47.386  1.00 83.94      A
ATOM   1586  O   GLU A 208      6.928  60.855  48.120  1.00 83.94      A
ATOM   1587  N   ALA A 209      6.613  62.732  46.906  1.00 96.12      A
ATOM   1588  CA  ALA A 209      7.929  63.298  47.221  1.00 96.12      A
ATOM   1589  CB  ALA A 209      8.053  64.748  46.668  1.00 27.97      A
ATOM   1590  C   ALA A 209      8.153  63.282  48.735  1.00 96.12      A
ATOM   1591  O   ALA A 209      9.192  62.824  49.213  1.00 96.12      A
ATOM   1592  N   LEU A 210      7.165  63.771  49.480  1.00 44.94      A
ATOM   1593  CA  LEU A 210      7.227  63.812  50.934  1.00 44.94      A
ATOM   1594  CB  LEU A 210      5.929  64.413  51.482  1.00 31.43      A
ATOM   1595  CG  LEU A 210      5.568  64.066  52.931  1.00 31.43      A
ATOM   1596  CD1 LEU A 210      6.619  64.625  53.863  1.00 31.43      A
ATOM   1597  CD2 LEU A 210      4.174  64.600  53.278  1.00 31.43      A
ATOM   1598  C   LEU A 210      7.464  62.430  51.554  1.00 44.94      A
ATOM   1599  O   LEU A 210      8.495  62.197  52.201  1.00 44.94      A
ATOM   1600  N   ASN A 211      6.508  61.519  51.374  1.00100.07      A
ATOM   1601  CA  ASN A 211      6.648  60.172  51.927  1.00100.07      A
ATOM   1602  CB  ASN A 211      5.497  59.264  51.479  1.00100.07      A
ATOM   1603  CG  ASN A 211      4.154  59.701  52.033  1.00100.07      A
ATOM   1604  OD1 ASN A 211      3.527  60.633  51.527  1.00100.07      A
ATOM   1605  ND2 ASN A 211      3.711  59.030  53.089  1.00100.07      A
ATOM   1606  C   ASN A 211      7.959  59.609  51.412  1.00100.07      A
ATOM   1607  O   ASN A 211      8.701  58.944  52.137  1.00100.07      A
ATOM   1608  N   GLN A 212      8.233  59.883  50.144  1.00 85.92      A
ATOM   1609  CA  GLN A 212      9.457  59.426  49.522  1.00 85.92      A
ATOM   1610  CB  GLN A 212      9.571  60.013  48.120  1.00100.07      A
ATOM   1611  CG  GLN A 212     10.776  59.549  47.342  1.00100.07      A
ATOM   1612  CD  GLN A 212     10.393  58.736  46.124  1.00100.07      A
ATOM   1613  OE1 GLN A 212      9.550  59.151  45.323  1.00100.07      A
ATOM   1614  NE2 GLN A 212     11.016  57.571  45.971  1.00100.07      A
ATOM   1615  C   GLN A 212     10.605  59.930  50.382  1.00 85.92      A
ATOM   1616  O   GLN A 212     11.534  59.186  50.703  1.00 85.92      A
ATOM   1617  N   ALA A 213     10.516  61.200  50.768  1.00 41.35      A
ATOM   1618  CA  ALA A 213     11.546  61.840  51.581  1.00 41.35      A
ATOM   1619  CB  ALA A 213     11.154  63.271  51.881  1.00 45.50      A
ATOM   1620  C   ALA A 213     11.828  61.112  52.883  1.00 41.35      A
ATOM   1621  O   ALA A 213     12.922  60.579  53.088  1.00 41.35      A
ATOM   1622  N   VAL A 214     10.829  61.112  53.761  1.00 83.40      A
ATOM   1623  CA  VAL A 214     10.925  60.472  55.069  1.00 83.40      A
ATOM   1624  CB  VAL A 214      9.521  60.254  55.678  1.00 48.39      A
ATOM   1625  CG1 VAL A 214      9.196  61.363  56.670  1.00 48.39      A
ATOM   1626  CG2 VAL A 214      8.486  60.244  54.582  1.00 48.39      A
ATOM   1627  C   VAL A 214     11.650  59.136  55.029  1.00 83.40      A
ATOM   1628  O   VAL A 214     12.493  58.839  55.881  1.00 83.40      A
ATOM   1629  N   ALA A 215     11.311  58.339  54.026  1.00 68.64      A
ATOM   1630  CA  ALA A 215     11.905  57.024  53.843  1.00 68.64      A
ATOM   1631  CB  ALA A 215     11.617  56.527  52.434  1.00100.07      A
ATOM   1632  C   ALA A 215     13.401  57.036  54.093  1.00 68.64      A
ATOM   1633  O   ALA A 215     13.874  56.577  55.129  1.00 68.64      A
ATOM   1634  N   ILE A 216     14.136  57.576  53.129  1.00 99.55      A
ATOM   1635  CA  ILE A 216     15.585  57.651  53.204  1.00 99.55      A
ATOM   1636  CB  ILE A 216     16.104  58.623  52.160  1.00 59.90      A
ATOM   1637  CG2 ILE A 216     17.570  58.348  51.892  1.00 59.90      A
ATOM   1638  CG1 ILE A 216     15.296  58.447  50.872  1.00 59.90      A
ATOM   1639  CD  ILE A 216     15.592  59.487  49.835  1.00 59.90      A
ATOM   1640  C   ILE A 216     16.060  58.067  54.590  1.00 99.55      A
ATOM   1641  O   ILE A 216     16.869  57.375  55.208  1.00 99.55      A
ATOM   1642  N   LEU A 217     15.547  59.193  55.074  1.00 64.91      A
```

```
ATOM   1643  CA   LEU A 217      15.903  59.698  56.394  1.00 64.91      A
ATOM   1644  CB   LEU A 217      14.980  60.861  56.762  1.00 37.93      A
ATOM   1645  CG   LEU A 217      14.969  61.401  58.195  1.00 37.93      A
ATOM   1646  CD1  LEU A 217      16.343  61.850  58.656  1.00 37.93      A
ATOM   1647  CD2  LEU A 217      14.007  62.561  58.228  1.00 37.93      A
ATOM   1648  C    LEU A 217      15.729  58.560  57.387  1.00 64.91      A
ATOM   1649  O    LEU A 217      16.632  58.242  58.164  1.00 64.91      A
ATOM   1650  N    LYS A 218      14.558  57.939  57.345  1.00 40.33      A
ATOM   1651  CA   LYS A 218      14.264  56.828  58.236  1.00 40.33      A
ATOM   1652  CB   LYS A 218      12.867  56.267  57.932  1.00100.07      A
ATOM   1653  CG   LYS A 218      12.883  55.002  57.080  1.00100.07      A
ATOM   1654  CD   LYS A 218      11.633  54.839  56.237  1.00100.07      A
ATOM   1655  CE   LYS A 218      11.820  53.728  55.201  1.00100.07      A
ATOM   1656  NZ   LYS A 218      10.636  53.558  54.307  1.00100.07      A
ATOM   1657  C    LYS A 218      15.313  55.737  58.027  1.00 40.33      A
ATOM   1658  O    LYS A 218      15.919  55.237  58.980  1.00 40.33      A
ATOM   1659  N    GLU A 219      15.509  55.399  56.752  1.00 47.87      A
ATOM   1660  CA   GLU A 219      16.434  54.370  56.286  1.00 47.87      A
ATOM   1661  CB   GLU A 219      16.394  54.331  54.759  1.00 87.82      A
ATOM   1662  CG   GLU A 219      17.156  53.201  54.110  1.00 87.82      A
ATOM   1663  CD   GLU A 219      16.986  53.206  52.595  1.00 87.82      A
ATOM   1664  OE1  GLU A 219      15.837  53.058  52.115  1.00 87.82      A
ATOM   1665  OE2  GLU A 219      18.000  53.364  51.882  1.00 87.82      A
ATOM   1666  C    GLU A 219      17.852  54.641  56.762  1.00 47.87      A
ATOM   1667  O    GLU A 219      18.588  53.716  57.096  1.00 47.87      A
ATOM   1668  N    HIS A 220      18.239  55.912  56.779  1.00 65.57      A
ATOM   1669  CA   HIS A 220      19.570  56.281  57.237  1.00 65.57      A
ATOM   1670  CB   HIS A 220      19.877  57.739  56.929  1.00 34.75      A
ATOM   1671  CG   HIS A 220      20.172  58.005  55.489  1.00 34.75      A
ATOM   1672  CD2  HIS A 220      19.422  58.576  54.516  1.00 34.75      A
ATOM   1673  ND1  HIS A 220      21.384  57.700  54.912  1.00 34.75      A
ATOM   1674  CE1  HIS A 220      21.369  58.076  53.645  1.00 34.75      A
ATOM   1675  NE2  HIS A 220      20.191  58.611  53.380  1.00 34.75      A
ATOM   1676  C    HIS A 220      19.613  56.090  58.735  1.00 65.57      A
ATOM   1677  O    HIS A 220      20.464  55.380  59.255  1.00 65.57      A
ATOM   1678  N    LEU A 221      18.688  56.748  59.422  1.00 50.48      A
ATOM   1679  CA   LEU A 221      18.591  56.645  60.869  1.00 50.48      A
ATOM   1680  CB   LEU A 221      17.158  56.994  61.308  1.00 48.41      A
ATOM   1681  CG   LEU A 221      16.772  58.342  61.941  1.00 48.41      A
ATOM   1682  CD1  LEU A 221      17.653  58.559  63.162  1.00 48.41      A
ATOM   1683  CD2  LEU A 221      16.900  59.501  60.954  1.00 48.41      A
ATOM   1684  C    LEU A 221      18.941  55.227  61.336  1.00 50.48      A
ATOM   1685  O    LEU A 221      19.723  55.030  62.272  1.00 50.48      A
ATOM   1686  N    ASN A 222      18.359  54.238  60.666  1.00 79.78      A
ATOM   1687  CA   ASN A 222      18.589  52.845  61.014  1.00 79.78      A
ATOM   1688  CB   ASN A 222      17.833  51.948  60.042  1.00 64.26      A
ATOM   1689  CG   ASN A 222      16.330  52.115  60.167  1.00 64.26      A
ATOM   1690  OD1  ASN A 222      15.777  52.007  61.261  1.00 64.26      A
ATOM   1691  ND2  ASN A 222      15.662  52.381  59.050  1.00 64.26      A
ATOM   1692  C    ASN A 222      20.057  52.466  61.093  1.00 79.78      A
ATOM   1693  O    ASN A 222      20.462  51.742  61.995  1.00 79.78      A
ATOM   1694  N    TYR A 223      20.859  52.971  60.166  1.00 81.32      A
ATOM   1695  CA   TYR A 223      22.280  52.670  60.169  1.00 81.32      A
ATOM   1696  CB   TYR A 223      23.029  53.617  59.234  1.00 81.85      A
ATOM   1697  CG   TYR A 223      22.680  53.484  57.769  1.00 81.85      A
ATOM   1698  CD1  TYR A 223      22.719  52.249  57.137  1.00 81.85      A
ATOM   1699  CE1  TYR A 223      22.450  52.132  55.795  1.00 81.85      A
ATOM   1700  CD2  TYR A 223      22.357  54.606  57.009  1.00 81.85      A
ATOM   1701  CE2  TYR A 223      22.087  54.502  55.669  1.00 81.85      A
ATOM   1702  CZ   TYR A 223      22.135  53.261  55.064  1.00 81.85      A
ATOM   1703  OH   TYR A 223      21.868  53.139  53.719  1.00 81.85      A
ATOM   1704  C    TYR A 223      22.867  52.786  61.574  1.00 81.32      A
ATOM   1705  O    TYR A 223      23.876  52.152  61.874  1.00 81.32      A
ATOM   1706  N    PHE A 224      22.243  53.589  62.436  1.00 65.20      A
ATOM   1707  CA   PHE A 224      22.755  53.765  63.799  1.00 65.20      A
ATOM   1708  CB   PHE A 224      22.110  54.988  64.473  1.00 70.91      A
ATOM   1709  CG   PHE A 224      22.403  56.303  63.781  1.00 70.91      A
ATOM   1710  CD1  PHE A 224      21.497  56.852  62.880  1.00 70.91      A
ATOM   1711  CD2  PHE A 224      23.596  56.977  64.015  1.00 70.91      A
ATOM   1712  CE1  PHE A 224      21.772  58.043  62.224  1.00 70.91      A
ATOM   1713  CE2  PHE A 224      23.878  58.168  63.362  1.00 70.91      A
ATOM   1714  CZ   PHE A 224      22.962  58.701  62.463  1.00 70.91      A
ATOM   1715  C    PHE A 224      22.515  52.510  64.644  1.00 65.20      A
ATOM   1716  O    PHE A 224      22.260  52.576  65.850  1.00 65.20      A
ATOM   1717  N    ALA A 225      22.621  51.362  63.987  1.00 42.35      A
ATOM   1718  CA   ALA A 225      22.412  50.070  64.618  1.00 42.35      A
ATOM   1719  CB   ALA A 225      22.202  49.004  63.547  1.00100.07      A
ATOM   1720  C    ALA A 225      23.563  49.668  65.522  1.00 42.35      A
ATOM   1721  O    ALA A 225      24.054  50.485  66.297  1.00 42.35      A
ATOM   1722  N    ASN A 226      23.981  48.404  65.421  1.00 61.29      A
ATOM   1723  CA   ASN A 226      25.074  47.880  66.240  1.00 61.29      A
ATOM   1724  CB   ASN A 226      25.162  46.352  66.127  1.00100.07      A
ATOM   1725  CG   ASN A 226      24.423  45.635  67.257  1.00100.07      A
ATOM   1726  OD1  ASN A 226      24.404  44.402  67.322  1.00100.07      A
```

-21-